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Illustrations OF HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

LEICESTER INFIRMARY.

I. NEURALGIA OF THE BRACHIAL PLEXUS SIMULATING WASTING PALSY.

By JOHN SLOANE, M.D., House-Surgeon to the Infirmary.*

IT is now well known that there is a form of paralysis associated with wasting of the muscles involved, without loss of sensibility and without any lesion in the brain or spinal cord, or impregnation of the system with lead. Bell and others in this country many years ago published cases of this disease, about which, however, we knew little until the valuable observations of M. Cruveilhier were promulgated. Since that period, many cases have been recorded, and much important information acquired. Last year, Dr. Roberts, of Manchester, published a very able and elaborate essay on this lesion, from observations made on one hundred and five cases, five of which had fallen under his own notice, and the others had been recorded by various writers in this country and abroad. Several names have been applied to this affection; successive observers changing the name in accordance with their views concerning its nature; but the terms wasting palsy and Cruveilhier's atrophy, adopted by Dr. Roberts, appear to be the least objectionable. The case which I shall now describe was at first believed to be wasting palsy, which it closely resembled for a considerable time; but as it progressed, symptoms appeared foreign to this disease, which induced us to alter our diagnosis.

June 7th, 1858. Joseph Sutton, aged 60, of Enderby, was admitted into the Leicester Infirmary, under the care of Dr. Shaw. The patient is a farm-labourer, of healthy parentage, who has suffered no privations. His habits have been temperate of late; formerly they were intemperate. He is a muscular strong-looking man.

In last October, after pulling up mangold for a week, during which, while at work, his left forearm was constantly wet, he was seized with a "violent pain" in the left shoulder, the left side of his neck, and in the outside of the arm as far as the elbow; movements of the upper arm were attended with much pain. The pain was equally severe during the day and night. It continued unabated till a fortnight ago; since then it has gradually lessened; and now he has very little pain. The improvement began immediately after his return from the Ashby-de-la-Zouch Baths, where he had been under treatment for three weeks. He received no perceptible benefit during his stay at the Baths.

On looking at his left arm, it is seen to be much more slender than the right; the deltoid is wasted; and a groove is observable between the upper margin of the glenoid cavity and the head of the humerus. He has no pain anywhere. He can swing his left hand backwards and forwards, or outwards and inwards, the limb being extended. He is unable to flex the elbow or to move the hand more than a foot in any direction from the outside of his thigh, where it hangs when he is standing, except by swinging, when the increase of motion thus gained enables him to move the hand about two feet. Motion in the wrists and in the joints of the fingers and thumbs, is perfect. In the middle of the arm, the circumference of the left is one inch and a quarter less than that of the right. Two inches below the upper extremity of the olecranon, the left arm is a quarter of an inch less in circumference than the right. Sensation is normal in the left upper extremity. He has not been able to work since his seizure with his left arm; but has fed himself and done other necessary acts with his right hand. The head of the left humerus is a little lower, and projects slightly forward, as compared to the right. Passive motion is as extensive in the left as in the right shoulder and elbow. Some grating is perceptible on moving the left shoulder; but he states that there is no pain. He has been deaf in the right ear since he was a boy; his memory is bad. In all other respects he is in perfect health.

He was ordered to have the affected arm galvanised twice a week, and to have a stimulating liniment applied every morning. He was also to take a tonic mixture, and to use the paralysed limb as much as possible. He derived no benefit from the treatment; and was discharged on August 10th, having been instructed to show himself at the Infirmary occasionally.

November 23rd. Sensation was impaired considerably in the region of the left deltoid; to a less degree in other parts of the arm. Sensation was normal in the forearm, and in the region of the neck above the scapula and clavicle, also in the scapular region. In the parts in which sensation is impaired he has a feeling of numbness. He could excite no muscular contractions in the deltoid by the galvanic current; this muscle seems to have disappeared. He could excite muscular contractions in the biceps and triceps by galvanism. He has had no cramps in his shoulder or arm. Muscular vibrations, that is, convulsive action confined to bundles of muscular fibres, not involving the whole muscle, were not excited in the affected parts by filliping or tickling the skin, by sudden exposure to the air, nor by galvanism. No other change or symptom worthy of notice had occurred since the previous report.

January 15th, 1859. The sensibility of the arm is less acute on the outer than on the inner aspect; least acute in the deltoid region. He has been losing sensation gradually in the parts described since he was in the Infirmary last summer.

March 15th. Sutton's sister called to-day to inform me that six weeks ago he suddenly lost the use of all his limbs, having been previously in his usual state of health. He gradually sank, and died five days after this attack, apparently retaining his cerebral functions unimpaired to the last. He was perfectly conscious, and conversed with his sister an hour before death. His urine during these five days required to be drawn off.

In answer to a note, I received the following information from my friend, Mr. Beresford, of Narborough. "The statement," he writes, "given to you by Joseph Sutton's friends is very nearly correct. He suddenly lost the use of the lower extremities and left arm, and also all power over the bladder and rectum. The following day the right arm became paralysed, and remained so till death took place, four or five days afterwards. His cerebral functions were not at all impaired, nor was there any contraction of the muscles of the face. I saw the man but once; but an assistant furnished me with the enclosed particulars."

REMARKS. What was the nature of the disease from which this man suffered? When he first came under observation at the infirmary, he presented all the essential symptoms of wasting palsy. There was wasting of several muscles, without any diminution of tactile sensibility, and apparently without any co-existing disease of the brain or spinal cord. Pain such as he had suffered, is frequently observed in Cruveilhier's atrophy.

As the case progressed, sensation became much impaired, and there was a feeling of numbness in the affected parts. According to Dr. Roberts, in 102 of the 105 recorded cases of wasting palsy, sensibility remained unimpaired; of the remaining three, one had a little numbness of the finger-ends, which soon passed off; a second had a sense of numbness in the index and middle

* In common with other house-surgeons of hospitals in this country, I have been requested by the Committee of Council of the British Medical Association to publish in the JOURNAL such cases as I might consider interesting. In compliance with this request, I shall in future send for publication reports of the important cases observed at this Infirmary.

fingers; but "the skin of the finger continued very tender to the touch;" and to the third, objects "felt flatter than natural." The very marked loss of sensibility which subsequently occurred in Sutton's arm showed that his disease was not wasting palsy.

Was it some affection of the brachial plexus, causing, first, pain and paralysis of motion, and afterwards loss of sensibility? In sciatica, which I mention as a typical form of neuralgia, the pain, as is well known, is increased by movements of the affected limb, which emaciates when the disease has been severe and of long standing.

Romberg states that "In the consideration of the prognosis of sciatica, we must remember the possibility of a supervention of paralysis. We do not possess many instances of complete recovery; an increased sensibility, or a dull sense of numbness generally continues for a considerable time in the affected leg." He mentions the case of a woman who, shortly after delivery with forceps, was seized with severe sciatica, from the pain of which she recovered in a fortnight; but anæsthesia of the sole of the foot remained so that she did not feel the insertion of a needle. (Romberg *On Diseases of the Nervous System*, vol. i, Sydenham Society's Translation.)

Valleix says that "The wasting of the limb only occurs in very severe cases; the semi-paralysis on which Cotugno insisted is seen still more rarely, and only in those cases where the neuralgia has been of long standing." (*Traité des Névralgies.*) The wasting of the deltoid and muscles of the upper arm which occurred in Sutton was doubtless caused by want of exercise. As movement of this portion of the limb was attended with much pain, quietude would of course be maintained, and wasting of the muscles resulted, such as we observe in the vicinity of anchylosed joints, or in limbs completely paralysed. I believe that the gradual loss of tactile sensibility after the disappearance of the pain was very peculiar; but the writers on neuralgia, to whose works I have access, seldom give detailed accounts of their cases, and in the few instances described at length in which paralysis resulted, it is not stated whether paralysis of sensibility existed, as well as that of motion. In my own experience I have never before seen a case of neuralgia terminating in paralysis.

There remains another way of accounting for this man's symptoms. They may be ascribed to disease of the spinal cord. There can be no doubt that lesion of the spinal cord was the cause of the symptoms in the last and fatal seizure in which he lost the use of all his limbs, and all power over the bladder and rectum—the cerebral functions remaining unimpaired. But I do not know any spinal disease in which there is, at first, pain with muscular atrophy, and afterwards impaired sensibility in the proximal half of an extremity, the distal half not being involved. I have not been able to find any case of spinal disease recorded in which there was even an approach to such symptoms. On this point I am glad to have the opinion of such an able observer as Dr. Roberts of Manchester, who, in his work previously referred to, states "That he is not cognisant of any injury or disease, undoubtedly located in the spinal cord, which affects the shoulders and upper arms, and leaves the fore arms and hands untouched."

I believe this patient suffered from brachial neuralgia of a very severe character, which induced wasting of the muscles from want of exercise, succeeded by partial anæsthesia. He was finally seized with some lesion of the spinal cord, which rapidly caused death.

The interesting part of the case is the great similarity it had for a considerable time to wasting palsy, and it was on this account that I was induced to bring it under the notice of the profession.

II. WASTING PALSY.

By John Sloane, M.D., House-Surgeon.

January 12th, 1859. Thomas Armstrong, aged 68, residing at Rothley, was admitted as out-patient, under the care of Mr. Benfield. Armstrong is a frame-work knitter, of healthy parentage, who was formerly a hard drinker, but he has been temperate for the last nine years. He states that he has suffered no privations, and has had no previous illness. He is a red-nosed, florid, grey-haired man, of healthy aspect.

About two years ago, he began to experience loss of power in his left thumb. He has been becoming worse ever since. He moves the left thumb more slowly than the right, but in other respects he can effect the normal movements. When at work he grasps a portion of the machinery with his left thumb and fingers of his left hand. He finds his thumb slip, and he has difficulty in raising it from the machinery. He is thus rendered almost incapable of following his employment. The muscles of the ball of the left thumb are wasted, as compared with those of the right. Sensation is normal in the left thumb and elsewhere. There is no visible wasting of the muscles of the left forearm.

I could not satisfy myself that there was any difference in the contraction of the muscles of the balls of the thumbs under the influence of galvanism. He has no cramps nor muscular twitching in the affected part. He began to be deaf sixteen years ago. He has been since gradually becoming worse, and is now almost perfectly deaf.

He was ordered to be galvanised twice a week in the part affected. He attended regularly for a fortnight, when, as he was very anxious to be enabled to resume his employment, I attached to the end of the left thumb a band of India rubber, which was fixed to a strap passing round the wrist. The power of flexing the left thumb was thus much increased. The patient did not attend afterwards.

Remarks. There is no doubt that this was a case of wasting palsy affecting the muscles of the ball of the left thumb. There was the paralysis associated with muscular atrophy without sensation being impaired, and without any lesion of the brain or spinal cord, or of the joints in the vicinity of the wasted part. The disease in this case, as is frequently observed, progressed very slowly. The ball of the thumb is very liable to be the part first affected by wasting palsy.

In one hundred of the cases collected by Dr. Roberts, the starting point of the disease is mentioned, and in twelve of these, the ball of one or both thumbs was first involved, and in twenty others the starting point is said to have been in one or both hands. In some of these it is not unlikely that the disease first appeared in the thenar eminences.

ST. MARY'S HOSPITAL.

ACUTE PURPURA: VENESECTION: RECOVERY.

Under the care of J. Alderson, M.D.

[*Communicated by* Linington Ash, Esq., *House-Surgeon.*]

Ellen O'B., aged 29, married, was admitted May 25th, 1859. Three months previously, she was confined of her first child; the labour was a natural one; she made a good recovery, and within three weeks was filling the situation of wet nurse, where she was accustomed to live much better than usual. She was quite well three days prior to her admission, and went to bed feeling as well as usual. During the early part of the night, she awoke with a painful sensation in her legs, as of needles running into them: this continuing, prevented sleep; and, on examining them in the morning, the legs were covered with blotches. She dressed, and continued at her work for some hours, by which time her knees and ankles had become red, swollen, and painful, so that she had to take to her bed. On the following day, her arms had become similarly affected. She suffered much from thirst and feverishness. She had begun to menstruate about ten days previously to this attack.

On admission, her countenance was expressive of suffering. Pulse 120, full, hard, and incompressible. The tongue was coated and cracked, but moist. The skin, which was hot and dry, presented, on various parts of her body (but most of all on the extremities) numerous blotches or ecchymoses, varying in size from a pin's head to that of a florin. The patches were distinctly raised above the surrounding integuments, and varied in colour from bright red to black; those of recent date being brilliant red, whilst the older ones were disappearing with a bruised appearance. Firm pressure neither relieved them of their contents nor altered their colour. Her breasts were very full and tense with milk. The bowels were costive. The sounds of the heart and lungs were natural. She was ordered a brisk purgative immediately, and a few drops of laudanum at night.

May 26th. She did not sleep for pain, and was very restless. She had great pain in the wrists and ankles. There is a large increase in the number of the spots, chiefly on the back and nates. The dorsum of the left foot appears as if largely bruised. The tongue is foul; the pulse 120, full, and hard. There is a slight tinge of blood in the saliva, streaking it. The skin is hot and dry; there is no acid smell. The countenance is anxious. The bowels are no freely open. The breasts were ordered to be drawn, and rubbed with digestive ointment. She was ordered to have an enema immediately.

℞ Potassæ bicarb. ℈j; mistur. potassæ effervesc. ʒj. M. Fiat haustus 4tis horis sumendus.

℞ Calomel. gr. iij; confect. opii gr. iv. M. Fiat pilula hac nocte sumenda.

Cras mane sumat misturæ sennæ ʒij.

She was ordered to be bled to ten ounces.

May 27th. She did not sleep last night, although the pains have not been so bad since she was bled. The joints are less tender. There are fresh spots over the chest, but those of older date are disappearing. The skin is cooler and more moist; the tongue is cleaner; the bowels are still costive; pulse 100, softer; the throat is sore. The enema was repeated, and a hydrochloric acid gargle was ordered.

May 28th. She slept a little, and feels much better. The right hand is much swollen and painful; the feet are less so. The skin is hot and moist; there is less eruption; the colour of many blotches is less red; others are of various colours. These last are not raised. The tongue is coated in the centre. She complains of thirst and vomiting, with slight abdominal pain and tenderness. The bowels have not been open for two days. Her urine is copious, acid, not albuminous. Pulse 100, more compressible. Eight leeches were ordered to be applied to the abdomen, and to be followed by fomentation. Three minims of dilute hydrocyanic acid were added to each dose of the medicine.

May 29th. She slept better. The joints are free from pain, but still slightly swollen. She vomited a greenish coloured fluid, with mucus and half-digested milk; no sarcinæ. There is pain in the hypogastric region, increased by pressure. The bowels are not open. The breasts are soft, and free from pain. The abdomen, since the fomentation, has been covered with eruption—not in blotches, but one uniform mass of red papillæ of blood, slightly raised. The rest of the eruption is losing its colour. There is no pain in the purpuric eruption, except on the abdomen.

May 30th. No fresh spots of eruption have appeared; the former ones are assuming a bruised appearance. She has no vomiting or pain in the hypogastric region. The pain in the joints has returned, and prevented sleep. Pulse 120, strong, and full.

June 2nd. She has been improving since last note. The eruptions have nearly all disappeared, leaving brownish marks behind. The bowels have been rather purged for the last few days. She was ordered to have compound chalk and opium powder occasionally; an ounce of decoction of cinchona three times a day; and better diet.

June 16th. Since last note, she has complained only of pain in the joints, relieved by leeching. She has been taking meat and porter for some days. There has been no appearance of the eruption till last night, when she felt a stinging sensation in the left groin, where there is to be seen now a patch of extravasated blood, as large as the palm of the hand, distinctly raised above the level of the skin, and surrounded with an areola of greenish yellow. She complains of much pain in the right arm and shoulder. The pulse is 110, weak. In other respects, she is quite well.

℞ Acidi hydrochlorici ♏i; infusi rosæ comp. ʒi. M. Fiat haustus ter die sumendus.

The bark was omitted; the diet was continued.

June 17th. The colour of the patch of blood is going off, with a bruised appearance. There are a few petechiæ on the calves of the legs.

June 18th. After walking down the ward, she complained of pain referred to the left popliteal space. This part presents now (three hours afterwards) a distinct bruised appearance.

June 20th. No further extravasation has occurred. She expresses herself as feeling better, and is able to walk about again. She still complains of rheumatic pain, worse at night, principally in the right arm. She is improving in general appearance.

June 22nd. Several spots of purpura have appeared on both calves. Her general health is improving. She was ordered to take half an ounce of lemon-juice three times a day.

July 4th. Since the last report, she has gone on progressing most satisfactorily. The pains in her limbs have not been constant, and now she is almost free from them. A few spots of purpura have shown themselves in various parts of her body, principally about the legs and knees. She sleeps and eats well. She has continued the lemon-juice, and has taken a fibrinous diet.

She was soon afterwards discharged, cured.

ST. GEORGE'S HOSPITAL.

FOREIGN BODY IN THE NOSE.

Under the care of Prescott Hewett, Esq.

A third case, in addition to the two reported in last week's Journal, presented itself the other day at St. George's Hospital, in which a little child had been suffering from discharge from the nose for a considerable time, without known cause. Mr. Hewett, in examining the child, fancied that he could detect something unnatural in the nose; but the child struggled and cried so that he could not be certain of it until chloroform had been given, when a shaving of wood, about five inches long, rolled up, and looking at first sight like a piece of ribband, was extracted.

The occurrence of three cases so close together, shows how common a cause of discharge from the nose this is in children; and, therefore, the importance of a more careful examination than is usually given to such cases.

WESTMINSTER HOSPITAL.

STRANGULATED INGUINAL HERNIA: OPERATION: PERSISTENCE OF CONSTIPATION AND VOMITING: DIARRHŒA: PYÆMIA: RECOVERY.

Under the care of W. A. Hillman, Esq.

[*Abridged from Notes by* W. N. Pell, Esq., *House-Surgeon to the Hospital.*]

S. H., aged 31, an omnibus conductor, admitted August 22nd, 1859, states that he had a hernial protrusion in the left groin eight or nine months ago, for which he came to this Hospital and had the protrusion returned. He has not worn a truss since this occurrence, and there has usually been a fulness of the inguinal canal of that side. On August 21st, whilst carrying his child, after long walking, the swelling became suddenly much larger, and extended downwards into the scrotum, giving rise to considerable pain and vomiting.

On admission, there was a large oblique inguinal hernia on the left side, distending the scrotum and the inguinal canal. The taxis was employed by the house-surgeon whilst the patient was in a hot bath, but without effecting any diminution in the swelling. Mr. Hillman, on being sent for, finding the tumour excessively tense and painful, the abdomen tender on pressure, and the patient in great suffering, with a cold clammy skin and a slow and feeble pulse, determined to operate immediately, without any further preliminary treatment.

Chloroform having been administered, an incision, three inches in length, was made over the upper portion of the swelling, extending about equally above and below the internal abdominal ring. An attempt was made, by successive division of the coverings, to return the contents without opening the hernial sac; but as this was found impracticable, the sac was opened, and the stricture (situated in the neck of the sac itself) having been divided, the hernial contents (which consisted of a very large quantity of omentum, and a long loop of small intestine, with scarcely any serous liquid) were returned into the abdominal cavity.

The intestine and omentum were both much congested, but did not present any gangrenous appearance or odour. The inguinal canal was ascertained to be perfectly clear, and the wound was brought together by stitches, compress, and bandage. The patient expressed himself as much relieved by the operation.

No action of the bowels occurred until the tenth day after the operation; the vomiting meanwhile continuing unchecked by the remedies employed (effervescing draughts, hydrocyanic acid, chloric ether with sulphuric acid, ice, turpentine and mustard fomentations), attended with considerable distension of the abdomen, a weak and rapid pulse, a dry and brown tongue, with considerable prostration, the patient being apparently kept alive only by the free administration of brandy, of which as much as twenty ounces were frequently given during the twenty-four hours.

On the tenth day after the operation the bowels were slightly relieved, and on the eleventh there were several copious dark-coloured evacuations, containing abundance of bile. The vomiting now became much lessened.

During the next three days there was considerable diarrhœa, and numerous pustules and blebs of various sizes made their appearance over the body, especially over the lower part of the back, and the little fingers of both hands presented much the appearance of severe whitlows.

The purulent matter was allowed to escape by incisions made into the larger pustules and into the fingers.

He is now (September 23rd) slowly recovering from a state of great prostration, under the use of nutritious diet and quinine.

Remarks. The chief features of interest in the case thus briefly outlined, are—

1. The total absence of any evacuations *per anum* until the tenth day after the operation.

2. The persistence of the vomiting for fifteen days after the operation; the vomited matters being distinctly fæcal during a portion of the time.

3. The occurrence of pyæmic symptoms with deposits of pus, in patches of various sizes, under the cuticle, over a great portion of the body, and the symmetrical crippling of the little fingers of both hands from purulent inflammation.

The result of the case seems to show the advisability of withholding any secondary operative procedure in the way of opening out the wound again for the purpose of further exploration, the operator feeling satisfied that the constriction has been sufficiently divided, and the protruded parts have been completely returned into the abdomen.

MIDDLESEX HOSPITAL.

HÆMATOCELE.

Under the care of A. Shaw, Esq.

S. E., aged 45, a bricklayer, was admitted into the Middlesex Hospital, under Mr. Shaw's care, on August 9th, 1859, for a tumour in the right scrotum.

Five months ago, he began to observe what appeared to him an enlargement of the testicle. The swelling gradually, without pain, increased to the size of his closed fist. A surgeon, to whom he applied, after examining the tumour in the dark with a candle, proposed to lance it for him; but as he suffered little inconvenience from it, he declined to have that done. On a Sunday, eight days before his admission, while sitting, and in the act of crossing his right leg over the left knee, he felt a sudden pain in the part. During that night, the swelling gradually enlarged to twice its former size; the scrotum also became blue; but he had no pain worth noticing. He continued at his work as usual; all that he did was to cover the swelling during the night with wet cloths; and in about three days it had returned to its former size. The builder's strike having commenced about that time, he thought it a good opportunity for having his complaint cured.

The tumour, on his admission, was of the size of a closed fist: it was irregularly globular, being at its upper part somewhat square shaped, owing to lobes slightly projecting from it. The situation of the testicle could not be exactly ascertained by its figure; but from the peculiar pain produced from pressure, it was supposed to be at the back part and low down. In front of the tumour fluctuation was perceived, but in a most indistinct manner, and that chiefly where the lobes projected. The cord was sound. He had scarcely any pain. On examination of the tumour in the dark, with a lighted candle, no transparency could be detected, whether by looking through a tubular stethoscope, or in the common way, without that assistance.

The treatment consisted for the first week in elevating the parts on a pillow, and keeping them constantly moist with a lotion of hydrochlorate of ammonia. For the following six days, mercurial ointment was applied; and that was succeeded, for a similar period, by the ointment of iodide of lead. No perceptible diminution of the tumour was observed.

August 29th. A puncture was made with an exploring needle in a prominent part of the tumour, in front, while fluctuation was the most distinctly felt; and as blood ran along the groove, the trocar for hydrocele was next introduced, when an ounce and a half of dark coloured blood was drawn off.

September 2nd. The tumour, which had been slightly reduced in size by the tapping, has regained its former dimensions. Mr. Shaw this day laid open the sac by an incision in the length of the tumour, of two inches in extent, commencing from the point of the former puncture. The walls were thick and dense. There immediately escaped from the sac three or four ounces of fluid dark coloured blood. The finger having been introduced through the wound into the cavity, a soft elastic mass, with smooth surface, like jelly, could be felt adhering apparently to the interior of the sac. This was not disturbed. A poultice was applied.

September 4th. Till to-day, broken down clots of blood have been discharged somewhat copiously into the poultice; and from the diminution of the tumour, the scrotum has become flaccid. No inflammation has been set up.

September 13th. Since blood has ceased to be discharged the matter which comes from the wound is sero-purulent. The quantity has been gradually diminishing, and now amounts to only a few drachms in the day. A poultice of cotton wool was ordered to be used.

September 20th. The testicle and scrotum have returned to nearly their natural condition. The former is a little enlarged, but otherwise appears healthy. The discharge has ceased, and the wound is closed.

September 27th. He left the Hospital cured.

Original Communications.

THE PATHOLOGY, DIAGNOSIS, AND TREATMENT OF CARDIAC DISEASES.

By W. O. Markham, M.D., F.R.C.P., Physician to St. Mary's Hospital, London.

IV.—Physical Signs of Pericarditis.

We have seen, in speaking of the causes of pericarditis, that the disease presents itself to us under two distinct forms, viz.: rheumatic and non-rheumatic. This is a fact which should be kept in mind in considering the diagnosis of the disease; for we shall find that the signs and symptoms of the two forms of pericarditis differ much the one from the other. In non-rheumatic pericarditis, the inflammation is generally of a latent kind, being insidious both in its origin and in its progress, and from an absence of all local symptoms of its presence, not unfrequently entirely escapes observation during life. In rheumatic pericarditis, on the other hand, we observe the inflammation in its typical form, and note the characteristic signs and symptoms which attend it. Local signs of the disease—viz., more or less pain and a feeling of oppression about the præcordia—are usually present, if not always in the earlier at least in the later stages of its course. Even in rheumatic pericarditis, however, the local and general symptoms do not, as a rule, give us the earliest information of the existence of the inflammation. We carefully watch for its physical signs in all cases of acute rheumatism, and it is the stethoscope which first apprizes us of its presence. Acute local pain, moreover, as I have elsewhere endeavoured to show, is not a usual or necessary accompaniment of simple pericarditis, but depends rather upon the pleuritis, which so often accompanies pericarditis. When, indeed, as often happens, local pain is absent, we may assume that the pericarditis is not associated with pleurisy. It is well, however, to be aware that in some cases, even when pain exists, it may be overlooked, in consequence of the severity of the associated arthritic element of the rheumatic fever.

The Heart's Sounds, Impulse, etc. At the very onset of the inflammation, the heart's sounds are generally louder, and its impulse stronger and more extensively felt over the præcordia, than natural. The force and rapidity of its action are, we may assume, increased by the local irritation, as well as by the general febrile condition of the patient. But as the inflammation advances, and when exudation gathers in the pericardium, the movements of the organ become feebler; its impulse irregular and trembling; and its sounds at last weak and altered in character, or superseded by morbid sounds. When a considerable quantity of effusion has taken place into the pericardium, and the patient lies recumbent, the heart naturally gravitates to the back of the pericardium; and, in consequence of this, a considerable quantity of fluid is interposed between it and the thoracic walls. Under such circumstances, the natural sounds and the impulse of the heart may become very weak, so as sometimes to be almost imperceptible. And the reason of this is, that the heart's movements are impeded by the mechanical pressure of the effusion upon it. The contractility of the muscular structure, moreover, is affected by the near contact of the inflammatory process which

is going on in the serous membrane; its nutrition and its vitality being thereby impaired; the result of which is, that the organ is at last partially paralysed. When the heart is thus paralysed, we may infer that a small amount of exudation will have as enfeebling an effect upon it, as a much larger amount would have under ordinary conditions—that is, so long as its muscular force remained intact and vigorous. However, we must not forget that a heart already hypertrophied, may become the seat of pericardial inflammation; and in such case, we may expect the sounds and impulse to remain loud and distinct, even when a considerable amount of effusion exists in the sac.

The physical signs characteristic of pericarditis are: double or single friction-sound heard over the præcordial region, and increase of dulness on percussion there. Occasionally, though very rarely, a tactile fremitus also is perceptible to the hand at the same part.

Friction-Sound. A double or single friction-sound heard over the heart, synchronous with its movements, and confined to the præcordial region, is the surest diagnostic sign we possess of the presence of pericarditis. It is, indeed, the first positive sign which enables us to determine with certainty the local character of the inflammation. Fever, præcordial pain or tenderness, and all the other general symptoms of pericarditis, may exist; yet, until this friction-sound be heard, we cannot with certainty affirm that the pericardium is attacked. The friction-sound appears at a very early stage of the inflammation; it may remain audible through the whole period of the existence of the inflammation; or it may be heard at the commencement, rapidly pass away, and appear once again when absorption of the fluid part of the exudation has taken place. The friction-sound usually accompanies both the systole and the diastole of the heart; occasionally it is heard during the systole only; in some very rare cases, only during the diastole. The smallest amount of lymph exuded on the surfaces of the pericardial membrane, will, I believe, give occasion to the friction-sound during the heart's movements, provided no fluid come between them; it is not impossible, indeed, that mere dryness of the pericardial surfaces may be sufficient for its production.*

The loudness and character of the friction-sound are modified by several accidental circumstances. Thus, the intensity of the sound depends not only upon the roughness of the surface of the fibrinous deposit, but also upon the area of roughened surfaces which rub upon each other; upon the force of the heart's action; and upon the amount of fluid effused into the sac. These accidents necessarily modify the loudness and clearness of the sound; but still, with rare exceptions, its essential character is ever that of a rubbing sound. Whatever particular well-known sound fancy may please to liken it to, it is still a friction-sound, bearing but one import to the physician's ear. Its varieties are only degrees of the same sound, embracing the gentlest rubbing, and reaching up to a rough creaking and even scratching sound.

Conditions necessary for the Production of the Friction-Sound. We may gather from the above what are the conditions requisite for the production of the friction-sound; viz., the deposition of solid or semi-solid matters on the surface of the membrane; the contact of its opposing surfaces; and a certain degree of force in the action of the heart. Serous, hæmorrhagic, or purulent effusions, will not of themselves occasion a friction-sound; nor will the sound arise when the heart's action is very feeble, nor whenever such an amount of effusion is present as suffices to prevent the surfaces coming in contact, and so rubbing on each other—a condition, indeed, which very rarely obtains in a complete manner; that is, at all parts of the pericardium.

What amount of effusion suffices, in any given case, to prevent the production of a friction-sound, cannot be determined. The size of the heart itself; the amount of solid deposit on the serous surfaces; the weak or strong action of the organ; the situation of the plastic deposit;—these, and other circumstances, which cannot be decided with any degree of certainty in such cases, necessarily modify the result. This much, however, appears certain, that (to use the words of Dr. Walshe) "no conceivable amount of fluid will of necessity totally annul friction-sound." When the quantity of serous fluid is large, the friction-sound, if it still exist, will be heard chiefly about the base of the heart and the large vessels; and here the sound often lingers, when it is no longer audible over other parts of the præcordial region. The reason of this no doubt is, that the opposing surfaces of the membrane are less liable to be separated by the fluid around the roots of the great vessels and at the base of the heart, than at other parts of the organ.

Sometimes, although very rarely, friction-sound does not avail us as a sign; for it may be absent altogether, or it may have been present and passed away before the patient comes under our observation. Its duration is uncertain; it may disappear after a few days, and it may remain constantly present for very many days together. It terminates either with the death of the patient, or in adhesion of the pericardial surfaces, or in the resolution of the inflammation; and, probably, sometimes in the formation of "white spots".

Difference between Endocardial Murmurs and Pericardial Friction-Sounds. It is in certain rare cases difficult, if not impossible, to distinguish the pericardial friction sound from an endocardial murmur. A great authority in stethoscopy asserts, indeed, that there is no kind of endocardial murmur (with the exception of the whistling murmur) which may not resemble a pericardial friction-sound. We certainly not unfrequently meet with cases in which the most practised ear will hardly venture to draw the difference or decide the nature of the murmur from the mere character of its sounds. In such cases, we must endeavour to enlighten our diagnosis by other signs: we must judge of the nature of the sound by the period of its occurrence, and by the presence or absence of coexisting signs of endocardial disease. The friction-sound is generally double; it does not coincide exactly with the heart's sounds; it commences rather *before* the systolic sound is heard; and, as a rule, it is not audible in the direction of the current of the blood flowing along the vessels out of the heart. The friction-sounds, moreover, do not replace the heart's natural sounds, except when they are so loud as to overpower them; their duration is variable and limited; they change their seat; they vanish and reappear; they are generally confined to the præcordial region; and they vary in force and situation from day to day. Pressure of the stethoscope, also, as Dr. Sibson has shown, increases the intensity of the pericardial friction-sound in certain cases, but does not, he says, affect an endocardial murmur.

This later remark, however, must not be received as invariably true, and all these differential signs, indeed, must be accepted with a certain degree of caution, and for the following reasons: An endocardial murmur may be, and very frequently is, present in pericarditis, and may thus, consequently, complicate the pericardial friction-sounds.* The heart's action may be so rapid, that the relation in time of the pericardial murmur to the heart's sounds cannot be determined. A pericardial friction sound, again, may be heard beyond the præcordial region; thus, I have heard a friction-sound precisely resembling, as far as the ear could judge, a rough aortic systolic bruit, conveyed up to the top of the sternum, in a case where, after death, the aorta and its valves were found perfectly sound, but the base of the heart and the vessels covered with much roughened lymph.

The other signs, also, proposed for the recognition of the pericardial friction sound, are modified by accidental circumstances, by the force of the heart, the quantity of fluid effusion, etc. Even pressure by the stethoscope does not appear to be an infallible sign. Dr. Walshe states that he has heard a mitral murmur increased in force by it; and it seems very probable, that pressure over the site of the pulmonary artery will in some cases excite or increase a murmur there. It must also be remembered that the effects of the pressure can hardly be made to bear upon the pericardial surfaces in persons advanced in life, and in whom the walls of the thorax are firm and unyielding. Neither can the pressure be exerted upon the affected parts, except when it can be made to bear directly against the roughened surfaces of the pericardium, and therefore not in cases where the friction-sounds proceed from the sides and back parts of the heart.

* This fact is drawn in part from analogy. I once distinctly heard pleuritic friction sounds in a lad, the subject of pyæmia, a few hours before his death. The very thin layer of lymph—however readily seen when looked for—which occasioned the sounds, would, I believe, have been passed over unnoticed, except for the fact of the friction having been heard during life. Let any one close his ear with the hollow of one hand, and rub over the back of it with a finger of the other, and he will find that the gentlest friction he can practise is plainly appreciable by the ear.

* Dr. Watson says, according to his experience, that pericarditis is invariably complicated with endocarditis. It must, however, be remembered, that a systolic bruit at the apex of the heart and over its aortic valves is not unfrequently present in many acute febrile affections, and disappear with the fever. The presence of such a murmur, therefore, in the course of rheumatic pericarditis, is no sure sign of endocarditis. A mitral systolic bruit, on the other hand, is, I think, almost invariably a sign of endocarditis under such circumstances; and, unlike the aortic bruit just spoken of, is rarely found to disappear with the cessation of the rheumatic pericarditis.

A pericardial friction-sound may also be confounded with an exo-pericardial friction-sound, arising from the rubbing of the outer surface of the pericardium against some opposing surface of the pulmonary pleura, when this is covered with plastic exudation. Hence, there appears to be no absolute sign by which these murmurs may be distinguished the one from the other in every case.

Sounds—certain bronchial râles, for example—which sometimes resemble friction-murmurs, often arise within the lungs; these, however, and likewise pleuritic friction-sounds, are readily distinguished from pericardial friction-sounds by the circumstance of their cessation during the arrestment of the respiratory movements.

A blowing murmur—endocardial—is occasionally observed along the aorta, and over the left ventricle, in cases of pericarditis, in which, after death, no valvular lesion is found to exist. The cause of such a murmur may be attributed either to pressure upon the aorta, produced by the exudation of lymph upon it; or to the loss of its elasticity, or some other alteration of its coats, caused by the inflammatory process; or to irregular action in the heart's muscular movements, involving those of its columnæ carneæ, whereby the function of the auriculo-ventricular valves is rendered, temporarily, incomplete; or again, it may possibly, I have thought, be ascribed to the pericardial adhesions, these being of such a character as to prevent the walls of the heart, and consequently the columnæ carneæ, from freely contracting, so that the mitral orifice is left partially unclosed during the heart's systole.

Pericarditis: Percussion Signs. Effusion into the pericardium increases the ordinary degree of præcordial percussion dulness, but not always in proportion to the amount of fluid present. When the effusion is very considerable the percussion may be extensively dull, reaching over the greater portion of the anterior surface of the left side of the thorax, and considerably beyond the right border of the sternum. Increased resistance, also, is, in such case, felt by the finger on percussion. The dulness arising from pericardial effusion is more marked than that which arises from hypertrophy and dilatation of the heart. Practised from day to day, percussion often enables us to follow the increase or diminution of the fluid in the pericardium; it does not, however, give us any accurate information as to the actual amount of effusion which has taken place. There are, indeed, several sources of error, which may mislead us in judging of the amount of effusion by percussion; and these it is well to note. A small amount of pericardial effusion, for instance, may be associated with hypertrophy of the heart, with malignant disease, with enlargement of the left lobe of the liver, with aneurism of the aorta, with condensation of the lung,* and with pleuritic effusion; and consequently the extent of the præcordial dull percussion-sound may, in such cases, be increased out of proportion to the amount of pericardial effusion. A careful analysis of the signs and symptoms present, however, will generally enable us to come to a tolerably correct diagnosis as to the nature of the coexisting diseases, and thereby prevent our falling into the errors referred to.

On the other hand, where there is emphysema of the lungs, or consolidation of the posterior parts of the lungs, the anterior parts being inordinately extended,† and consequently overlapping the heart to an unusual extent; or when the lungs are adherent to the thoracic walls in front of the pericardium; or where there is atrophy of the heart,—the amount of effusion present may appear, on percussion, to be less than it really is. An inflated stomach, also, often modifies considerably the percussion sound over the præcordial region.

As a general rule, we find in health that about two and a half to three inches of the heart's surface is uncovered by the lungs. This uncovered surface may be rudely likened to a triangle. A line drawn perpendicularly down, and somewhat to the left of the centre of the sternum, from about the fourth to the sixth or seventh rib, defines the position of the anterior edge of the right lung, and constitutes the right side of the triangle; its left side is an irregular oblique line, corresponding to the anterior border of the left lung, and drawn from the fourth left sterno-costal articulation, downwards through the cartilages of the fifth and sixth ribs; these two lines meet above, directly beneath the level of the fourth rib; the base joins the sides above the cartilages of the sixth rib.

The dull percussion is often ill-defined at the base of the triangle, because the left lobe of the liver in many persons lies in close contact (the diaphragm intervening) with the lower border of the heart.

Between this surface of the heart and the thoracic walls, only fat and intercellular tissue naturally intervene; hence, when dulness on percussion exists beyond the limits here indicated, we may suspect an abnormal condition of the parts beneath. The dulness in itself, of course simply indicates that solid or fluid matters, containing no air, exist beneath the thoracic walls in those parts where a certain amount of air ought naturally to be present; the diagnostic value of the dulness must be decided by other signs.

The extent of dull percussion-sound varies during respiration and expiration: on a full and deep inspiration, when the lungs almost wholly cover the pericardium, the dulness is hardly perceptible; on a deep expiration it becomes proportionally increased.

The fluid effusion collects, in the first instance, about the base of the heart and the roots of the great vessels; and it is in their situation that the abnormal dulness is first observed; but as the quantity of effusion increases, the dulness reaches across to the right, or beyond the right border, of the sternum, upwards towards the clavicle, and towards the left lateral region—that is, in the direction of the heart's breadth; the heart, being heavier, sinks downwards and backwards in the pericardium when the patient lies recumbent; and its apex is pressed somewhat to the left of its natural position.

We gather from the above that increased præcordial dulness is, in itself, no certain sign of pericardial effusion; but, judged of by the light of other signs, it becomes so. Pericardial effusion commences at the anterior, pleuritic effusion at the back and sides of the thorax. In hypertrophy of the heart, the pericardial dulness is not so well marked, nor is the resistance so complete as in pericardial effusion. And besides this, hypertrophy has its special signs to distinguish it; in effusion the dulness commences suddenly and increases most markedly in an upward direction; in hypertrophy, downward and towards the left side, or in the direction of that particular part of the heart which is enlarged. In fact, there are very few instances in which the careful observer can be deceived in his diagnosis, especially if he has watched the progress of the pericardial inflammation from its commencement.

Enlargement of the liver, particularly of its left lobe, occasionally pushes the heart upwards and to the left; encroaching on the præcordial region, and increasing much the præcordial dulness. Such an enlargement of the liver would hardly fail of being recognised.*

It is not necessary to refer particularly to the other abnormal conditions which may produce increased præcordial percussion dulness; their coexisting symptoms will generally enable us to distinguish between them and the pericardial effusion.

Together with the friction-sound, and other signs of pericardial effusion, a *fremitus* is sometimes, but not often, felt over the præcordial region when the hand is laid thereon. It is doubtless occasioned by the same cause as that which gives rise to the friction-sound. It has been observed in cases in which effusion of lymph has taken place external to the pericardium, whereby the pericardium has been united to the thoracic walls.

In young subjects, and in those in whom the elasticity of the ribs and their cartilages permit of it, a bulging of the præcordial region is sometimes observed where the pericardial effusion is considerable.

Distension of the external jugular veins is not unfrequently observed in the advanced stages of pericarditis, and when present it indicates obstruction to the circulation of the blood through the heart; the degree of the distension is, in fact, a good test of the amount of the impediment. When the veins do not collapse, but remain constantly distended during inspiration and expiration, we may be sure that the circulation is seriously obstructed.

[*To be continued.*]

* Pneumonic consolidation of the parts of the lungs which overlap and surround the pericardium, very frequently coexists with pericarditis—being, apparently, excited by the contiguity of the pericarditis. Such consolidation will, of course, of itself occasion increase of the præcordial dull percussion-sound.

† I have observed cases of this nature after death, where the anterior border of the right lung, in consequence of the respiration being carried on by the anterior portions of the lungs, lay far over the distended pericardium, and imparted a clear sound to moderately forcible percussion over the sternum; and this, too, even when the distended pericardium reached beyond the right border of the sternum.

* Dr. Graves (Lecture II, 164) relates a case of this kind, where the base of the heart was pushed up as high as the first intercostal space by the left lobe of the liver, and fluid suddenly effused in the abdomen.

EXCERPTS FROM DAILY PRACTICE.

By T. Herbert Barker, M.D., F.R.C.S., Bedford.

II.—Case of Abortion between the Third and Fourth Month, ending fatally from Intractable Vomiting and Diarrhœa. Note of a Second Case in which Poisoning was suspected.

The first of the following cases differs somewhat from the last one reported in the Journal for July 30th. It shows that even abortion may not be sufficient to save life in cases where the irritation produced by pregnancy has excited severe systemic disturbance.

On August 28th, 1858, Mrs. H., aged 42, the mother of a large family, aborted in the fourth month of her pregnancy. She was not under my care at the time of the abortion, for she had left this neighbourhood to visit London. I learned, however, that a week before the abortion, she was seized with violent diarrhœa and vomiting, which continued unchecked up to the period when the fœtus was thrown off. The abortion had been preceded and followed by considerable hæmorrhage. Recovery was never fairly established, the intestinal irritation continuing all the time. Unfortunately, she determined to return home while yet suffering from the disturbance of the alimentary system and consequent depression, and was conveyed directly from her bed-room to the railway station. The last seven miles of her journey was in an open gig, and she was exposed to heavy rain.

As soon as she reached home, eight days after the abortion, I was sent for, and found her suffering purely from gastro-intestinal symptoms. She was frequently vomiting, the vomited matters consisting of the ingesta, with a considerable quantity of bile of the usual green colour. No food could be retained, and her exhaustion was extreme. But the most intractable symptom was diarrhœa. This was persistent, in spite of every treatment. The motions were as frequent as ten or twelve in the twelve hours; and the matters excreted were copious, liquid, somewhat deeply tinged and offensive, occasionally containing shreds of mucus. She complained of but little pain, except a burning sensation in the epigastrium; and occasionally, in the cardiac region, of acute darting pains, to which she had been liable for some years. There was no tenderness on pressure of the abdomen. The pulse was 112, small and feeble. The tongue was moist, slightly furred, and red at the tip. The skin was moderately warm. Thirst was excessive.

In this case I used every variety of treatment, relying chiefly on astringents. In the list of remedies given, with every care, were catechu, kino, iron in the form of tincture and the persesquinitrate, the mineral acids, and opium in every shape. Opiate suppositories, and starch and laudanum enemata, were freely used, but without avail. Food, in any form, and medicines appeared sometimes rather to increase than to lessen the symptoms. The vomiting was distressing, and the diarrhœa profuse, as though the entire system were being drained of its fluids. The countenance became indescribably pinched and anxious. In spite of a liberal supply of brandy, carbonate of ammonia, ether, etc., she gradually sank, and died from sheer exhaustion, precisely fourteen days after the abortion.

Remarks. In my last reported case, we saw that abortion saved the life of the patient by stopping the gastro-intestinal mischief. In this case, although abortion occurred, a fatal result ensued from the intestinal flux and the vomiting. The case, therefore, tells rather against than for the practice of producing abortion. It is nevertheless to be borne in mind, that the patient was subjected to unfavourable conditions after the delivery; that is to say, she travelled a great many miles, and was exposed to rain, while in a condition but ill fitted to bear these risks.

The second point of interest is, that medicinal measures of the astringent type—pushed to the fullest extent and with every care—proved utterly unavailing. They neither arrested the vomiting nor checked the diarrhœa. Some of the medicines, particularly the cretaceous astringents, seemed to me to increase the mischief and to cause pain. Indeed, it has never been my lot to witness a case in which all medicinal and dietetic treatment was more tenaciously resisted.

If—as one of our judges recently intimated in his most extraordinary charge to the jury—inamenability to all treatment constitutes a ground of suspicion of foul play, here was a case for the gravest suspicion. Nothing can be weaker, more illogical, or more dangerous, than such a dogma.

This case differs slightly from the previous one in regard to symptoms. In the preceding case, the symptoms were of the dysenteric type. In the present they were, I should say, rather of the choleraic type. In both, nevertheless, shreds of membrane were thrown off. In the preceding case there was tenesmus; in this, that symptom was absent, the matters ejected being passed without effort or pain. In the preceding case, the patient made no complaint of burning pain in the stomach; in this case that symptom was a distressing one. These are the differences: they are minor in kind, but deserve attention. In one grand respect the cases are intimately allied; that is to say, the gastro-intestinal symptoms had their origin in uterine irritation, and in that alone.

There is every reason to believe that the connection between really serious and even fatal disturbance of the gastro-intestinal mucous membrane and pregnancy, is more common than has been suspected. Since my former case was forwarded to the Journal, several recorded cases have been referred to. In a letter by Drs. Richardson, Thudichum, and Webb, upon the case of Isabella Bankes, these authors show that this connection has been so frequently observed on the other side of the Atlantic, that it has led to the announcement of this subject for prize competition. This prize was awarded to Dr. David Hutchinson, for an excellent essay, in which he has brought together many valuable facts. The connection of dysentery and pregnancy has been noted by Guillemeau, Mauriceau, Shaw, Denman, Burns, and others of our early obstetric writers. In 1848, Dr. Churchill published the history of a case, which, in some points, is like the one which occurred in my practice. A case by Mr. Edmunds was fatal after the miscarriage; the diseased action had been thoroughly set up, and the dysenteric symptoms continued in spite of everything. Another fatal case has occurred in the practice of Dr. Freeman, of Plymouth. Vomiting alone, without either diarrhœa or dysentery, has proved fatal during pregnancy. Dr. Tyler Smith has met with such cases. M. Cartaya, in an essay, *Vomissements incoercibles pendant la Grossesse*, has collected fifty-eight cases, twenty-four of which proved fatal to the mother. Professor Stoltz, of Vienna, records eleven fatal cases. In 1855, a discussion took place in the Academy of Medicine in Paris, on the propriety of producing abortion in these extreme cases.*

The resemblance of these cases of sympathetic gastro-intestinal mischief to irritant poisoning, has been so striking in some instances, as to have led to suspicion. In two cases, indeed, referred to by Dr. Tyler Smith and Dr. Richard Quain, the suspicion was so strong, that the ejecta were submitted to chemical examination. These facts remind me that two years ago a lady was repeatedly under my care, with severe attacks of sickness and diarrhœa, during the very earliest period of pregnancy. Several circumstances in this case rather puzzled me, and led me to suspect that the gastric symptoms were not solely the result of the pregnancy. This lady had never suffered from sickness during any previous pregnancy; it was not in the least restricted to the morning, but common at all times, but mostly after food; and whether at rest, or otherwise. The sickness was not accompanied with acidity in any shape; but it invariably preceded severe diarrhœa, as though the stomach rejected some offending material, a portion of which afterwards passed through the intestinal track, and caused mischief there. These attacks were perfectly amenable to treatment. A soothing mode of medicinal treatment, diet, and regimen, with quiet, always relieved; the attacks were, nevertheless, frequently repeated, and severe, producing considerable constitutional disturbance. Within the first four months and a half of pregnancy, this lady was under my care as many as seven times with attacks of sickness and diarrhœa of the character described above. After I had seen her through four attacks, the idea of irritant poisoning from some source or other certainly crossed my mind; and I mentioned my suspicion to the husband. We carefully examined the kitchen, but could not find anything improperly used for culinary purposes, and there our suspicions ceased. Every subsequent attack was regarded as a not common phase of sympathetic stomachic and intestinal affection, which would probably cease before long. This was the result; for, after the first half of pregnancy, she never had another attack.

* A Letter to the Right Hon. Sir G. C. Lewis, Bart., M.P., Her Majesty's Chief Secretary of State for the Home Department, from three of the medical witnesses for the defence in the case of Thomas Smethurst. In the references given above, I have followed the writers in this letter.

With these facts before us, it behoves us to act with great caution where pregnancy is present; for there can be no doubt that now and then we meet with physiological and pathological effects, which are quite beyond the common beaten track of observation, and which can only be duly appreciated when the fact that pregnancy exists is itself known.

It has been urged by some professional men, that while these peculiar symptoms incident to pregnancy are possible, they are not common. I admit the fact; and I admit it on twenty years of active experience. But it strikes me, from the same experience, that cases of irritant poisoning are much less common; and I have sufficient confidence in my countrymen and women to believe that this view is correct. Any way, I am very happy that, in my cases, I brought no one up to trial for a life; and I submit that medicine will soon be called Moloch, if many similar cases, because they resist remedies, are to be set up as illustrations of slow poisoning by felonious administration.

[*To be continued.*]

ON THE TREATMENT OF ASTHMA BY SEDATIVES.

By HYDE SALTER, M.D., F.R.S., Fellow of the Royal College of Physicians, and Assistant-Physician to Charing Cross Hospital.

TOBACCO: STRAMONIUM: CHLOROFORM: OPIUM: LOBELIA: INDIAN HEMP: ÆTHER.

THE recognition of the nervous nature of asthma, of the paroxysmal character of its symptoms; of the fact that the air-passages were in a state of spasm; that a part at least of its essential pathology appeared to be a morbid susceptibility to certain stimuli; that many of its exciting causes were such as exalted nervous irritability; that the subjects of it were commonly individuals of quick and mobile nervous systems;—these, and analogous considerations, long ago suggested the use of sedatives both for the prevention and alleviation of the asthmatic paroxysm.

The *modus operandi* of sedatives, both in the cure and prevention of asthma, is doubtless by allaying nervous irritability; destroying for the time that morbid sensitiveness of the pulmonary nervous system that constitutes so essential a part of the disease. And whilst, on the one hand, it is the nervous theory of asthma that has suggested the use of sedatives, their efficacy on the other—the immediate and perfect relief that follows the use of some of them—is among the best proofs we have of the correctness of this nervous interpretation of the phenomena of the disease.

Of all the classes of remedies used in asthma, I think that sedatives constitute the most numerous. I wish I could say that they excelled others in efficacy as much as they do in numbers. But they are of very unequal power; for while one or two of them are of very great value, others appear to be of little worth, and some even prejudicial. Chloroform, for example, is, in my opinion, one of the most valuable remedies for asthma that we possess; the inhalation of its vapour putting a stop to the asthmatic paroxysm more speedily and more certainly than anything else I know. Opium, on the other hand, I have found, as far as my experience has gone, positively worthless.

Moreover, with regard to sedatives, asthma exhibits very strongly its characteristic caprice;—stramonium smoking is, to some patients, an infallible cure, while others might just as well smoke so much sawdust, and not only receive no benefit, but experience no result of any kind from it.

The principal remedies of this class are:—

I. Tobacco, in sedative doses; II. Chloroform; III. Opium; IV. Stramonium; V. Lobelia; VI. Indian Hemp; VII. Æther, in sedative doses.

Of some of these I have had very little practical experience. I will speak of those of which I have, and first of—

I. TOBACCO. I have, in a previous paper, spoken of tobacco as a depressant. But tobacco as a sedative is quite another thing. The dose is different; the physiological effects are different; the principle of the cure is entirely different. In smoking with the view of producing depression, the individual must be unaccustomed to the drug, or the tobacco very strong, or the dose very large; in smoking for sedation none of these is necessary. For tobacco to cure asthma as a depressant it must produce collapse; as a sedative it merely produces that composing and comforting condition with which smokers are so familiar. As a depressant it renders spasm impossible by knocking down nervous power (doubtless by poisoning the nervous centres); as a sedative, by temporarily effacing a morbid sensitiveness to certain stimuli, and inducing a normal indifference and tolerance of them. Any one may experience the sedative effects of tobacco, and all smokers do habitually; but the production of its full depressant action is almost impossible in those who have long accustomed themselves to its use; in others, however, as in women and children, it is so easy, that the difficulty is to prevent sedation from running into depression. It is for this reason that it is necessary, in administering tobacco as a sedative only, to the uninitiated, the delicate, or the young, to give the very mildest form, in carefully measured quantities, and to insist on its slow and deliberate exhibition.

It is of the sedative use alone of tobacco that I am now speaking.

Asthmatics are very commonly smokers, and many of them find in the habit an almost unfailing antidote to their disease. But in almost all the cases that I have met with, it is rather as a prophylactic that it is used—to secure immunity when under dangerous circumstances, or to meet the first threatenings of an attack—than as a veritable curative to cut short spasm.

II. CHLOROFORM. One of the most powerful and speediest remedies which we possess for asthma, to which I should, perhaps, give the first place of all, is chloroform. It is, of course, a comparatively recent remedy; but its marked physiological effects early suggested its appropriateness, and the result has fully justified the trial. I have not had many opportunities of witnessing its effects personally, because when asthmatic patients consult one they are generally not suffering from the disease at the time; but in the cases in which I have witnessed it I have been very much struck with the completeness of the control which it exercises over the asthmatic condition, and with the absence of all danger in its administration, provided the asthma is of the uncomplicated spasmodic form. If the only source of dyspnœa is bronchial spasm, it seems to me that it may be as safely given to an asthmatic in the height of a paroxysm as to a healthy person.

I shall not easily forget the first case in which I administered it. A poor woman was brought into King's College Hospital at the time that I was house physician there, supposed to be dying by those who brought her in. She was quite unable to move, and could barely speak; but it was easy to perceive, from the violent action of the respiratory muscles and the loud wheezing that accompanied it, that the suffocation from which she was suffering was of the asthmatic kind. I at once administered chloroform. After a few whiffs the spasm began to yield, and before I had given her enough to make her insensible it had quite subsided and her breathing was free. In ten minutes after entering it she left the hospital—well.

Even in asthma with bronchitis I have known it, if carefully administered, of great service, by getting rid of the asthmatic element of the dyspnœa, and so putting a stop to one of the sources of suffering, and one of the causes of pulmonary congestion and bronchial exudation; and at the same time, by relaxing the constricted air passages, facilitating the discharge of the accumulated mucus. In chronic bronchitis I have seen at least half of the dyspnœa vanish on its administration, showing how much of the symptoms were due to spasm. I think its usefulness in these cases has been overlooked, and that, if carefully and tentatively given, it might be tried in them without risk. Certainly for the time the patient is placed under much better circumstances, even as far as the bronchitis goes.

The sooner it is given after the commencement of an attack the better, for if the spasm has existed for some time it is apt to recur as soon as the influence of the chloroform passes off. The plan recommended by Dr. Russell Reynolds, of recurring to it at the first indications of an attack is, I think, a very good one, for the spasm yields with much greater facility, and is cut short while it is in so incipient a state that the treatment is virtually preventive. He mentions the case of a young lady (*Lancet*, October 29th, 1853) who, by inhaling a few drops on her handkerchief whenever an attack threatened, at once averted it, and was thus virtually cured of her troublesome complaint.

Dr. Walshe says he has seen three results of chloroform inhalation, administered during a fit of asthma, and pushed to narcotism;—"Total relaxation of the spasm during the continuance of insensibility, with the immediate return of dyspnœa on the restoration of consciousness; gradual return of the difficult breathing as consciousness is restored; and suspension, or at least mitigation, of the paroxysm for the time being." The last effect he has found the rarest of the three; but, on

the other hand, the temporary relief afforded by chloroform is sometimes more complete and more rapid than that afforded by any other agent.

As in all other cases, so in asthma, the patient should never administer the chloroform himself. Dr. Todd's remarks on this point are so judicious, and enforced by so striking an example, that I cannot forbear quoting them. "In the administration of chloroform," he says, "I would give you this twofold caution:—First, to give it gradually and cautiously, and not in a full dose, not to produce insensibility, especially if there be anything like blueness of the surface; because, though remedial to asthma, it will tend to increase the very consequences which are most to be feared from the circulation of venous blood. Secondly, to impress on your patient that he must never give it to himself, nor without the presence of a medical man. The following case was related in the papers the other day:—A person who was in the habit of curing his attacks of asthma by inhaling chloroform, when administering it to himself one day, and when in a state of half subjection to its influence, in order to produce the full effect placed his handkerchief on the table and buried his mouth in it; his insensibility became deeper and deeper, till at last he was too far gone to raise his head. He therefore continued inspiring it; his coma became more and more profound; and, a short time after, he was found in that position quite dead." (*Medical Gazette*, Dec. 1850.)

III. Opium. To opium in asthma I have myself a great objection. I do not mean to impugn the correctness of those who profess to have seen benefit derived from it; all I would say is, that I am not certain I have ever seen it do good; that I have often seen it do harm; and that I should have antecedently expected, from its known physiological action, that it would be prejudicial, and tend to increase the very condition for which it is given. I have endeavoured to show that sleep favours asthma; and that it does so on account of the ascendancy that excito-motory action then acquires. The heavier and more oppressed the patient is the intenser does the asthmatic spasm become; and, on the other hand, the wider awake and more vigilant he is—the more exalted sense and will—the more readily does it yield, so that often simple rousing is enough to stop an attack that was gradually creeping on the sleeper.

Anything, therefore, that soporises aggravates the asthmatic tendency. Now this is exactly what opium does. What we want in asthma is a sedative that, like stramonium, sedates but does not narcotise; or one that, like chloroform, goes much further, and produces universal muscular relaxation. And not only does opium act prejudicially by tending to exalt reflex action in proportion to the drowsiness and lethargy it produces, but, by lowering sensibility, it prevents that acute and prompt perception of respiratory arrears which is the normal stimulus to those extraordinary breathing efforts which are necessary to restore the balance.

But, beyond this, opium seems to have a specific tendency to excite involuntary muscular action, and induce a tendency to spasm. The exact explanation of this will depend upon the theory of muscular contraction that is adopted; and into this at present disputed physiological question, I will not enter. If, then, I had been asked, antecedently to all experience, whether opium would be useful in asthma, I should have replied, on the strength of the spasm-theory of the disease, that it would not.

But I would not let any theoretical objection run counter to clinical evidence; and if experience said "give opium", no theory should prevent my recommending it. My own experience, however, coincides with these objections; and I am disposed to think that the frequency with which it is given in asthma depends upon an unthinking following of routine and a want of close and exact observation. Not only have I often seen asthma worse for it when given during the fit, but I have seen it brought on when it did not previously exist. An asthmatic gentleman, in whom I have often watched this, and who is frequently obliged to resort to opium on account of colic, never takes it without being rendered more or less asthmatic by it, however free from the disease he may have previously been.

I would say, then, prefer any other sedative to opium; and, unless there is some special complication that indicates it, never give it at all.

IV. Stramonium. The smoking of the datura as a remedy for asthma was introduced in 1802, from India, by General Gent, and soon obtained, as new remedies are apt to, the reputation of being specific and infallible—every body with any shortness of breathing was smoking stramonium. Its use, however, has illustrated the general inapplicability of any one remedy to all cases of a disease, and the special caprice of asthma; and time has shaken it into its proper place, and assigned it its true worth;—that its original reputation greatly exaggerated its merits, but that it has undoubted though very unequal value, and will probably always maintain its place amongst the real remedies of asthma.

Perhaps no drug has been given with more contradictory results, and perhaps in no way is the caprice of asthma better illustrated than in its effects in different cases. In some it is *the* remedy; in the majority of cases, as ordinarily used, it seems utterly inoperative, and in some positively injurious.

"Sometimes," writes Dr. Watson, "it calms the paroxysm like a charm. The late Dr. Babington told me of a patient of his, who had been grievously harassed by asthma for a series of years, but who declared to him, after he had made a fair trial of stramonium, that he no longer 'cared a fig' for his asthma, which he could always stop in a moment. So a Mr. Sills, in a collection of communications relative to the datura stramonium, published in London in 1811, states that he had been a great sufferer from asthma; that the fits continued, with short interruptions, from thirty-six hours to three days and nights successively, during which time he had often, in the seeming agonies of death, given himself over, and even wished for that termination to his miseries. But, having at length discovered the virtues of stramonium, he uses this strong language. 'In truth, the asthma is destroyed. I never experience any ill effects whatever from the use of the remedy; and I would rather be without life than without stramonium.'"

Among several striking cases of the efficacy of stramonium, communicated by Dr. Gooch of Croydon, I will quote the following:—"Mr. L., 22 years old, for the last four years has had great difficulty in breathing, attended by wheezing and cough, which attack him suddenly, when in bed or at meals, disabling him from his business, and sometimes continuing more than a week. It occasionally seizes him so violently that he is unable to speak, and appears to be threatened with instant suffocation. He has had much medical advice, without receiving material benefit. He now smoked the thorn-apple, swallowing the saliva and smoke; by these means the fit terminates in a few minutes. He smokes every day, even when the fit does not occur. Sometimes it attacks him while dining in company; in which case he retires, smokes a pipeful, and returns to his friends breathing freely." I might go on quoting cases *ad libitum*, but must content myself with referring the reader to many very interesting and striking ones in the seventh and eighth volumes of the *Edinburgh Medical and Surgical Journal*, the twenty-sixth volume of the *Medical and Physical Journal*, and the various medical journals published at the early part of the present century.

In most of the cases that I have personally witnessed, it has given only temporary relief—mitigated rather than cured the spasm; but, in a case recently communicated to me, its effects appear to be nearly as striking as in the cases I have just quoted. The patient was what is commonly termed a "martyr to gout", and suffered most severely from asthma. He could not walk, in consequence of the gouty state of his legs and feet; and one of his amusements was to pick the chalk out of his fingers with a knife! "I remember," continues my informant, "one day, when I was at his house, he came home in his little hand-carriage, in which it was his wont to be wheeled about, and, on being helped into the parlour, he was in such a state from a violent attack of his asthma that he could not speak, but made signs to his daughter, by pointing to a cupboard, that she should reach him his pipe of stramonium. She lighted it, and, after he had taken a few whiffs, the breathing became relieved, and he was able to speak; and, after a few more, the spasm and oppression so completely vanished that he could converse as well as usual."

On the other hand, one is always being disappointed with it; in a large percentage of cases it does no good at all, and in some has been said to prove injurious, and in a few instances fatal. Dr. Bree tried it in eighty-two cases; in fifty-eight of these it had no permanent effect, and in the remaining twenty-four it acted injuriously. General Gent, who was instrumental in introducing the practice, fell a victim to it. Aggravation of the dyspnœa, paralytic tremblings, epilepsy, headache, and apoplexy, are some of the evils said to have been induced in some of the cases above referred to.

To what are these contradictory results to be attributed? Partly, doubtless, to the caprice of the disease, which behaves in the most irregular way to all remedies; but partly, I think, to the mode of preparation and drying of the drug. An asthmatic patient of mine informed me that while he received great

benefit from stramonium grown and dried by a relative of his, that which he gets at the shops does him no good whatever. He sent me a specimen of this home-prepared stramonium, and certainly it was a very different thing, both in appearance and smell, from what one commonly sees: it had not lost its fresh greenness, nor the genuine solanaceous smell. I think, therefore, asthmatics would do wisely to grow and prepare their own stramonium. Part, too, may depend on the time at which it is administered; stramonium, like other remedies, will cut short an incipient spasm, while over one that has been long established it has but little power. The great thing is to give it in time; and for that purpose, since the patient in general is awoke from his sleep by the paroxysm, he should put his pipe, already filled, with the means of lighting it, by his bedside over night, so that on awaking with the dyspnœa he might immediately use it.

My friend Dr. Bullar of Southampton tells me that he has seen benefit from the inhaling (not the mere smoking) of stramonium smoke. "A year ago," he writes, "I met with an old asthmatic, who had cured himself and relieved many others by using *cold* stramonium-smoke. He smoked the stramonium as you do tobacco, then puffed the smoke into a tumbler, and then inhaled the cold smoke into his lungs. I am now attending an asthmatic lady, who could not inhale the hot smoke, but who inhales the cold smoke in this way with great relief."

The same plan of *inhaling*, I find mentioned in a very interesting case in the *Edinburgh Medical and Surgical Journal*, as far back as 1811. The patient says:—"The way in which I employ this remedy is thus: I fill a common tobacco-pipe with the stramonium cut in small pieces, and inhale the smoke as much as possible into the lungs, which causes heat and pain about the fauces and throat, and I am obliged to breathe once or twice before I can inhale it again, when I draw in the smoke; and so on alternately till the herb is consumed, which occupies about half an hour, once a day. The saliva I swallow." Now this is introducing the drug in a different, and certainly more powerful, way than by simply smoking it, and one well worth trying. By ordinary smoking absorption takes place by the oral surface only; here it is introduced into the lungs themselves and absorbed by the respiratory surface, whose absorbent powers exceed those probably of any other surface of the body. Besides, it has the advantage of being applied to the very part affected.

There are several species of datura in use, of which that commonly employed in this country, the *datura stramonium*, appears to be the least powerful. The *datura ferox*, which was first introduced by General Gent, seems to be much stronger. The *datura tatula*, from which what are called stramonium cigars are made, appears also to be stronger.

The seeds are much more powerful than the other parts of the plant; their analysis yields more than three times as much of the active principle, daturia. My friend Dr. Alexander of St. Helena, where spasmodic asthma appears to be rather common, informs me that, while he has found the smoking of the leaves almost worthless, he finds the smoking of the seeds a most efficient and powerful remedy; and that whereas he was disposed before he tried the seeds to regard the reputation of stramonium as a myth, he has since their employment come to the conclusion that it is one of the most satisfactory of the remedies of asthma. He states, however, that the effects of the seeds are so powerful, that great care is necessary in their administration; they should be smoked in very small and gradually increasing quantities, and their effects closely watched. He has seen, on two or three occasions, alarming symptoms supervene on their use. I have not yet tried the remedy of smoking the seeds, but I shall certainly do so. I do not see why the leaves should not be steeped in a decoction of the seeds, dried, and then smoked, so as to administer by smoking reliable preparation of an uniform strength.

Exhibition by smoking certainly appears to have some advantages; absorption by the oral surface, especially if combined with inhalation, is sufficiently rapid, and at the same time gradual and more regulable than by the stomach. One would rather either take or give any preparation of the *solanaceæ* by smoking than by swallowing. One feels, with regard to such ticklish remedies, the full force of the *facilis descensus* and its alternative. Nevertheless, I frequently give the extract, and often with marked benefit. It should be commenced, I think, in quarter-grain doses, gradually increased to a grain or a grain and a half. The Edinburgh preparation—an alcoholic, and not a watery extract—is the best and most reliable, the active principle, daturia, being very soluble in alcohol, but very sparingly so in water. The tincture may also be given in from ten-minim to twenty-minim doses every four hours, gradually increased till it occasions some obvious effect on the system.

I may say, in conclusion, with regard to this drug, that its great value in some cases would, in spite of its too frequent impotence, always induce me to give it a trial in cases in which it had not been tried; that I do not believe it is attended with any danger except from the most egregious over-dosing; that, since the common fault is want of power, I should prefer the stronger forms, the *ferox* and *tatula*, giving them tentatively and carefully; that inhalation of the smoke and swallowing the saliva may be advantageously combined with the ordinary method of smoking; and that it cannot be given too early in an attack. I think it does more in the way of prevention than cure; I think I have seen better results from the long continued practice of smoking a pipe of it the last thing at night, whether an attack of it is threatening or not, than by waiting until a paroxysm comes on. I have seen this nightly pipe, the last thing before going to bed, apparently keep the disease at bay for an indefinite time, as long as it was continued, but followed by its immediate reappearance as soon as it was left off. The stramonium seems to leave for some hours a state of nervous system in which the asthma is not likely to come on; and, since its invasion is almost always at night, a pipe at bedtime conducts and guards the patient through the critical time. I should say, then, let this always be one part of its administration; and keep up the practice of smoking it the last thing at night for some months after the disease appears to have yielded, so as to completely break through the habit.

v. Lobelia. Of lobelia I can say but very little; and the reason I can say so little is, that, being doubtful of its really doing any good, I have for some time ceased to prescribe it. But I have lately heard of some successful cases of its employment by medical friends; and I am inclined to think that my want of success, and the want of success that has generally attended its use in this country, has depended upon not giving it in sufficiently large doses. I have never given it in larger doses than from fifteen minims to half a drachm; but I find that in America, where it is much more used than in this country, and has a high reputation as an almost unfailing specific in spasmodic asthma, they give it in vastly larger doses; they consider half an ounce a full dose, but recommend two drachms every two or three hours till some decided effect is manifested. In many successful cases on record it has been given in small antispasmodic doses;* but I am inclined to think its great success among the Americans, and in Dr. Elliotson's hands, and in many cases which I find scattered about in the journals, depends upon its having been given in doses producing the characteristic depressant action of the drug. In fact, the condition that a large dose produces is such as I should think no asthma could resist; it is almost identical with tobacco-poisoning—giddiness, faintness, sickness, cold sweat, and complete muscular relaxation. I should have the most perfect faith in its value in asthma when producing such symptoms as these; but they are not the symptoms one likes to produce in one's patients, and cannot be considered devoid of danger. I see no objection, however, to Dr. Elliotson's plan of giving frequent small and gradually increased doses. He recommends ten minims every quarter or half hour, increasing each dose a minim till the disease yields, or it seems to disagree with the patient. If this last should be the case, and vomiting and headache come on, the medicine must be left off for a time, and continued when the headache, etc., is removed, not increasing the dose beyond the last given.

One circumstance that makes it the more necessary to be careful of overdosing a patient, and that strongly inculcates commencement with small doses, is that different individuals tolerate it in such different quantities. Dr. Elliotson states that in some instances a single minim will produce sickness, while in other cases, on the contrary, sixty or even ninety drops were taken for a dose. He mentions a young lady who, being subject to spasmodic asthma, always carried ninety drops of the tincture in a small phial; this dose she swallowed whenever an attack of the disease came on. He mentions, also, the following extraordinary and almost incredible case:—"A medical man, suffering from asthma, having failed to obtain his usual relief from his usual dose of the tincture, increased it to fifty-minim doses, which he took every hour for twenty-four

* "I have, for upwards of two years past, been afflicted with inveterate asthma, which deprived me of natural rest, and the spasmodic effects of which were frequent and most distressing. When I found these paroxysms coming on, I took fifteen drops of tincture of lobelia, which invariably gave me immediate relief, although previously to my using this remedy the violent fits often lasted for hours." (*London Medical Gazette*, vol. iii.)

hours. Experiencing but little relief he added a minim to each dose till it reached seventy-five minims; this he took for forty-eight hours, and the disease was relieved. His pulse was becoming intermittent, perspiration broke out over the body, and he became languid; small doses of ammonia soon restored him to his usual state. In the last four days this man must have taken twelve ounces of the tincture." (*Lancet*, vol. ii, p. 144.)

Another circumstance that makes it the more necessary to be careful not to administer this drug in undue quantities is, that different specimens of it differ so much in strength. Dr. Elliotson complains of this, and assigns it to faulty preparation. But the Americans say that the plant itself varies very much in strength, depending chiefly upon the situation in which it has grown; that which has grown in damp situations being rank and strong, while that which has grown in dry places is almost inert. But I must not say any more on a medicine about which I began by saying I could say nothing.

VI. Indian Hemp. The Indian hemp, *cannabis sativa*, is much given in India as an anti-asthmatic, and among the natives has a great reputation. I can easily imagine from its physiological action that its reputation is well deserved. It is at once a stimulant and a sedative. I should be inclined to think it would act best in small stimulant doses. Given in this way it produces the same effects as coffee, only in a more marked degree—it exhilarates, imparts great activity and intensity to the intellectual faculties, and exalts the functions of animal life. In any case in which coffee is useful, I should expect that Indian hemp would be so in a greater degree. I think in large doses it might even do harm, from its hypnotic tendency. In this respect, there is the same objection to it as to opium. I can say nothing of it from my own personal experience; I have never given it, nor seen a case of asthma in which it has been given.

VII. Æther. Æther is mentioned as a remedy by almost all writers on asthma. I have never seen but one case in which it did any good, though I have given it in scores of cases. In that case it acted, and always had acted, like a charm. I cannot say that in any other case I ever saw it do a particle of good, and think I have often seen it produce a disagreeable oppression, and even increase the spasm. Others speak well of it; but that is the result of my experience.

Rebiews and Notices.

On Wounds and Injuries of the Eye. By White Cooper, F.R.C.S., Oculist to the Queen; Ophthalmic Surgeon to St. Mary's Hospital; etc. London: Churchill. 1859.

The author, when in charge of difficult and anxious cases, had often felt the want of an English work specially devoted to this subject. In the present volume, he has attempted to supply this hiatus in ophthalmology, by presenting to the profession ten chapters which are replete with important clinical information derived from his own practice and that of his *confrères* who are or have been engaged in the cultivation of the same branch of surgery. The work is illustrated by numerous cases, spirited woodcuts, and some coloured drawings. The latter evince a marked advance, as works of art, upon anything of the kind which has yet been published in the text-books of this country.

In respect to the treatment of inflammation, which engages so large a share of the attention of ophthalmic surgeons, Mr. Cooper appears to be eclectic, avoiding, on the one hand, the excesses in depletion and mercurialisation which characterise the therapeuticism of the followers of the Beer school, and, on the other, the premature and almost universal administration of tonics which marks the practice of what may be termed the modern Brunonians.

As an instance of the author's treatment, we adduce the following case:—A pallid sickly-looking shoemaker applied to Mr. Cooper on July 2. Six weeks previously, a particle of iron from a blacksmith's anvil had become imbedded in the cornea of the right eye, where it remained. The palpebræ were much swollen and congested; the conjunctiva, sclerotica, and cornea, were acutely inflamed. The foreign body lay imbedded in the cornea, surrounded by infiltrated pus; and the anterior chamber was half-filled with pus. Intense pain in the eye and head deprived the patient of sleep, and of the ability to labour. There were great debility, a weak pulse, and foul tongue. Mr. Cooper extracted the foreign body, ordered two leeches to the neighbourhood of the eye, a warm poultice, and frequent fomentations; three grains of calomel immediately; an aperient draught after the expiration of six hours; six grains of Dover's powder every night. The patient was not seen again till July 9th. The pus had then entirely disappeared from the cornea; the iris and pupil had become distinctly visible; there was asthenic congestion of the sclerotica. He was ordered powder of cinchona and bicarbonate of soda, five grains of each, to be taken three times a day, with nutritious diet; the bowels to be regulated by sulphate of soda. A blister was applied behind the ear. In six days afterwards, merely a slight film marked the seat of injury to the cornea; the eye was well.

In illustration of the importance of a full and complete examination before deciding against the presence of a foreign body, the author relates the case of a tradesman who, while walking in the street, *felt something strike into his right eye, with acute pain.* He consulted two surgeons, who bled and salivated him. Five weeks after the accident, much debilitated, still in pain, and with gums so sore that he could not eat, the patient applied to the North London Eye Infirmary, where, for the first time since the accident, the upper lid was everted, and a fragment of cinder, of the size of a pin's head, found firmly adherent to its conjunctiva. A rapid recovery followed its removal.

When a foreign body is impacted in the upper *cul-de-sac* of the conjunctiva, the symptoms are those of chronic inflammation. The conjunctivæ or palpebræ become thickened, and the papillæ hypertrophied, sometimes to an enormous extent; the conjunctiva oculi participates in the thickening; and a thick yellow discharge agglutinates the lashes, accumulates at the canthi, and thus renders the eye an object of disgust. When this is seen, especially when there is the appearance of fulness about the upper lid some time after a foreign body has entered the eye, a full examination should be insisted on. The subsidence of pain often misleads. The patient feels sure that the body has "worked out", and dislikes the idea of the lid being everted; but that is the proper course to adopt. If, on turning the lid, a fungous-looking mass is exposed, the particle will most probably be found impacted in its centre; if hidden in the fold of reflection, the hypertrophy of the papillæ will be strong evidence of its presence.

In the second chapter, the author treats of Foreign Bodies in the Eyeball. The gravity of the injury will vary with the size and situation of the foreign body. It is singular how tolerant some eyes are of substances which enter the *anterior* chamber; indeed, the number of recorded instances is great in which bodies have there remained, and become encysted, without material injury to the eye. A chip of metal may be driven with such force and velocity as to pass through the cornea, the wound closing behind it so instantaneously as to retain the aqueous humour. The wound made by a penetrating fragment of percussion-cap is a clean incised one, and the vision is not destroyed immediately in those cases in which the cap has gone through the sclerotica, and has not injured the transparent parts of the eye. The lodgment of a foreign body in the *crystalline lens* is rare. Mr. Cooper gives four cases, three of which occurred in the practice of continental surgeons. The danger of leaving a foreign body in such a position is forcibly illustrated by a case which occurred in the practice of Dr. Jacob. A piece of copper cap remained on the lens of a little boy for two or three years, without exciting irritation. The lens became absorbed, the foreign body remaining entangled in the opaque capsule. In a year afterwards, the chambers were

filled with blood, as if from recent injury. The pupil was dilated, the eye was spoiled, and the cap had disappeared. We presume these latter changes were discovered after the blood had been removed by absorption or paracentesis. If a foreign body pass to the back of the iris, the consequences are serious; atrophy of the globe was the result in a case which occurred in the practice of our author. In an instance which came under our observation, and in which we extracted the foreign body nine years after its intrusion, the eye was of normal size and tension, but perfectly amaurotic.

If a chip of metal have lodged in the vitreous humour, without wounding the lens or its capsule, it will be readily discovered by the ophthalmoscope, unless it is buried in a position which cannot be brought into view.

Mr. Cooper considers change of colour in the iris to be one of the most distinctive indications of a foreign body being lodged in the eye. Looking upon this symptom as common to all injuries of the eye in which the iris has partaken of the vascular disturbance, we are in the habit of relying for a diagnosis upon a minute inquiry into all the circumstances which attended the accident, and the subsequent behaviour of the eye. The longer the time which has elapsed since the accident, the more easy is the formation of a correct opinion. When, after the injury, the patient suffers a recurrence of what has been termed neuralgic ophthalmia, which cannot be referred to constitutional or external causes, we predict the presence of a foreign body in the eyeball, even although the natural efforts may have already extruded a particle of metal. The only disease that simulates this class of cases is neuroma of one of the ciliary nerves.

In reference to the atrophy which affects eyes in which a foreign body is lodged, the author remarks, that it occasionally, though rarely, happens that a globe which has been softened again becomes plump, and there may be an increase in the perception of large objects; but useful vision is not to be expected.

Mr. Cooper advises the removal of the foreign body, wherever situated, if it be practicable; and lays down rules for the guidance of the surgeon in the performance of the operation. He does not consider the presence of inflammation, which he regards as an effort of nature to throw off the foreign body, to contraindicate an operation. When a foreign body in the iris is encysted, and not creative of irritation, he does not interfere.

The importance of anæsthesia by chloroform, in the first examination of a case in which the extraneous body is hidden, and the value of cannula-forceps (which, by the way, require considerable experience in their use on the part of the surgeon), are emphatically indicated.

For clinical examples of the connexion of epilepsy with injuries of the globe (p. 56), we must refer the reader to the work itself.

The section on Gun-shot Wounds presents, without question, the best account of the subject in the English language. After a gun-shot injury, the first thing to be done is to carefully cleanse the eye; and then a full and satisfactory examination should be made (if necessary, while the patient is under chloroform), to ascertain the nature and extent of the injury. An ecchymosis should be carefully inspected, lest a wound be concealed by the effused blood. It is important to ascertain, if possible, the relative position of the injured and the injuring parties when the accident occurred, and especially the direction of the patient's face at the moment. A shot crossing obliquely, and striking the inner or nasal side of the eye, will almost certainly penetrate; a shot striking the external side has a better chance of glancing, in which case it will cut a groove in the conjunctiva.

In determining whether or not a shot has pierced the eye, the following points have to be considered: the weight of the shot, the distance from which it was discharged, the position of the eye, and the direction whence the shot came. Mr. Cooper wisely cautions the surgeon to give in such cases a guarded prognosis, remarking that a slight graze may detach the retina, and cause hopeless amaurosis. The shot may merely penetrate the cornea, and drop into the anterior chamber, the eye receiving no permanent injury. The author gives a minute account of the appearances presented by an eye immediately after a shot has penetrated it.

The chapter is concluded by an interesting selection of cases, with observations, in which a bullet had entered the eye or the neighbouring parts.

The length to which this article has extended warns us that we must draw our extracts to a conclusion; we therefore content ourselves by stating that the fourth and fifth chapters are devoted to Incised and Punctured Wounds; the sixth, to Contusions and their Effects; the seventh, to Rupture of the Eyeball, Dislocation of the Lens, and Dislocation of the Eyeball; the eighth, to Intraocular Hæmorrhage; and the ninth, to Burns and Chemical Injuries.

In the tenth and last chapter, the author considers Sympathetic Ophthalmia—a disease which has received considerable elucidation as to its pathology and treatment from English provincial surgeons. In evidence of this, we may remark that Mr. Barton of Manchester originated the plan of removing the front of a disorganised globe for the cure of the sympathetic irritation which had been produced by the lodgment of a fragment of percussion cap; Mr. Prichard of Bristol first applied the operation of extirpating the contents of the orbit to the treatment of *all* cases of sympathetic disorder; and in the same year (1854) and Journal in which these views were promulgated, Mr. Solomon of Birmingham indicated an important point in the prognosis of traumatic ophthalmia, namely, that so long as the inflammation extends no deeper than the iris, the fellow-organ is rarely, if ever, sympathetically implicated. He also first pointed out that the absence of pain and inflammation in a diseased and collapsed globe does not prevent the second eye from becoming affected. Our author's observations may be advantageously consulted by those who seek information on this highly important subject.

In drawing this notice to a close, we must express our hearty commendation of Mr. White Cooper's work. In style, it is agreeable and unaffected, therefore the more easily read, and, what is all important, the more likely to instruct. As a guide to the management of the class of cases of which it treats, it is thoroughly honest and efficient. Moreover, we consider that a more able exposition of the doctrines of the new school of ophthalmic surgery, than Mr. White Cooper's work on *Wounds and Injuries of the Eye*, has not emanated from the medical press of this country.

Lectures on the Diseases of Infancy and Childhood. By Charles West, M.D., Fellow of the Royal College of Physicians: Examiner in Midwifery at the Royal College of Surgeons of England; etc. Fourth Edition, revised and enlarged. Pp. 755. London: Longman, Green, Longman, and Roberts. 1859.

Dr. West's *Lectures* have long gained a high reputation: and we have much pleasure in announcing to our readers the appearance of a fourth edition, revised and enlarged, of this standard work. Since the appearance of the first edition, about eleven years ago, the experience of the author has doubled: so that, whereas the lectures at first were founded on six hundred observations and one hundred and eighty dissections made among nearly fourteen thousand children, they now embody the results of nine hundred observations, and two hundred and eighty-eight *post mortem* examinations made among nearly thirty thousand children, who during the past twenty years have been under his care.

British Medical Journal.

SATURDAY, OCTOBER 1st, 1859.

DEATH OF WILLIAM PULTENEY ALISON, M.D., D.C.L.Oxon., F.R.S.E.

EMERITUS PROFESSOR OF MEDICINE IN THE UNIVERSITY OF EDINBURGH; AND LATE PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION.

This worthy and distinguished man died at Colinton, near Edinburgh, on September 22nd, at the age of 69. From the infirm state of health in which Dr. Alison had been for some time, the melancholy announcement we now have to make will cause little surprise: but we are sure that every one who has known him personally or by his actions, and especially that numerous body of medical men who in past years have had the benefit of his teaching and advice, will not the less deeply regret the departure from among us of so eminent and excellent a man. It would be impossible to point to any member of our profession more universally beloved and respected in his life, or one whose memory will be more cherished after his death. A brief sketch of Professor Alison's career appears in another page.

OUR MINING POPULATION.

As a large number of our associates are engaged in practice among the mining population, it will perhaps not be out of place to call attention to the extraordinary rate of mortality which prevails among this class of the community. The fork-grinders of Sheffield are notorious for pursuing the most deadly occupation in existence; and closely following upon their track we find the very large population employed in procuring minerals from the bowels of the earth. This population numbers upwards of three hundred thousand souls; it is, therefore, of serious moment to find that, on the average, upwards of 50 per cent. of the deaths are from pulmonary disease—consumption proving the chief agent of destruction.

A pamphlet, just published by our associate Mr. R. Q. Couch of Penzance, has drawn our attention to the deplorable condition of the Cornish miners, which, we regret to say, appears to be as destructive to life as that of the coal-mines. Thoracic disease, according to tables drawn up by him for the years ranging from 1837 to 1857 inclusive, is 50 per cent. more fatal among miners than among the population of the neighbourhood otherwise employed. This is certainly a most startling fact, and one which loudly calls for the interference of government.

There can be little doubt that, as a rule, mines in this country are wretchedly ventilated. In nearly all cases—even in the best managed pits—the miners, whether of metals or of coal, work in a very high temperature which enervates them to the last degree: but, in addition to this source of disease, the method of exit from the Cornish mines is in itself peculiarly adapted to complete the exhaustion which the foul hot air of the mines has commenced. Unlike the coal-miner, who is lifted to the surface bodily in the cage, the tin or copper-miner of Cornwall has to drag his weary limbs up thousands of feet of almost perpendicular ladders. It is calculated that, in many of the mines, the unhappy workman, after a hard day's work, has to climb an ascent equal to the height of Cader Idris! In two or three of the mines, it is true, a "man-machine" has been introduced, which lifts the man from stage to stage until he emerges from the mouth of the pit; but such machines are the exceptions rather than the rule. And, when he toilfully reaches the pit's mouth, sweating from an atmosphere frequently at 90°, he finds himself in winter, exposed to a bitter wind far below freezing point. Can it be wondered at that pulmonary diseases are the scourge of the mining population?

We are compelled to say that they manage these things better abroad. In the country about Aix-la-Chapelle, large buildings are observable for miles before reaching them. These are vast wooden structures, which enclose the mouth of the pit entirely, where the miner finds some protection from the outside air, and where he can change his clothes, and thus fit himself to bear the change of atmosphere. Why should the miner in England not receive a similar protection? Lady Basset, who owns the mines at Camborne, in Cornwall, has established warm baths, in which the miner can wash himself after his labours, and this without a farthing of expense, inasmuch as the waste steam is employed. Her example, however, we regret to say, is not followed; and some of the wealthiest proprietors of mines in the county continue to draw colossal fortunes from the life-blood of their people.

Not only do we find that the Cornish miners themselves are a most unhealthy race, but their children, who have never entered the mines, are equally so. Mr. Couch, in his interesting pamphlet, shews that, among children under five years of age, the mortality of the offspring of miners is much greater than among the children of parents following other occupations. This, of course, is to be expected: the exhausted tree sends forth sickly shoots.

But where, we ask, is all this frightful waste of life to end? If we turn our attention to the coal-measures, we shall find that matters are no better there. The Registrar-General here comes to our aid, with some very interesting results drawn from an immense number of returns touching the occupation of coal-miners.

Among this class, the mortality, and consequently the expectation of life, follow an inverse ratio to that of the population at large. In the whole community, out of 100,000 persons alive at the age of eighteen, the number is not reduced to one-half till after the age of sixty-three; while out of the same number of pitmen alive at eighteen, one-half of the whole will have died off in their sixtieth year. The mortality is singularly intense, at the earlier ages, among coal-miners; for while, among the general lives of England and Wales at the age of eighteen the deaths are 0·750 in 1000, in the corresponding year

the loss among miners is more than one per cent. Out of the ordinary population, one in one hundred and thirty-three die, while of pitmen, one in ninety-seven perish in their nineteenth year. The general expectancy of life, or probability of living at that age, is about forty-one years; while that of pitmen is about thirty-nine. While the various tables of ordinary mortality and expectation of life proceed in a uniform manner from youth to age, those for miners show that the mortality decreases from eighteen to thirty-one, to such an extent that the mortality at that age is considerably below that of the whole population. Of ordinary lives, one in every ninety-five dies in the thirty-second year; while only one in one hundred and seventeen, among miners, perishes at that period. Thus, the probability that the person will survive the next year is greater, among miners, at thirty-one than at eighteen, and the mortality of persons of the latter age employed in pits, is equal to that experienced by others at thirty-one; on the other hand, the pitmen who have arrived at the age of thirty-two, experience less mortality than other ordinary lives eight years younger, and continue to hold greater intensity of life for a long period afterwards. Among the ordinary population of 100,000 persons alive at the age of eighteen, there are 46,015 living at sixty-five; at the same age, out of a similar number, there are only 39,687 pitmen—the difference being owing to the excessive mortality in mines during the younger ages of the persons employed therein. At the age of seventy, there are remaining of ordinary lives, 34,901; of pitmen, 28,895. Of these last, 1,032 live to the age of ninety-two, while of ordinary lives there are only 717 remaining.

Notwithstanding this disposition to longevity on the part of pitmen, it is asserted also that this class shows a very large amount of sickness at every period, and an increased sickness with advance of years. At the age of twenty, miners experience an average sickness of forty-six per cent. more than the general class. At age thirty they have seventy per cent., at forty years seventy-eight per cent., at fifty years seventy-six per cent. more than the average sickness of the general class of lives.

These are facts which the *millionaire* proprietor of mines, as he stirs his blazing fire, would do well to ponder. What a mass of misery do these figures indicate! At fifty years of age, the poor pitman has endured 76 per cent. more than the ordinary amount of sickness among the general population! It is, indeed, hard to believe that a race of men can be found to forsake the face of day and the cheerful companionship of their fellows, for the purpose of living all their days the lives of moles, and of degrading their physical health to the lowest endurable point. We smile at the absurdities of caste, as we witness its workings in India; but is not the spirit of caste as inexorable in free England? How otherwise can we account for a whole class of people thus devoting themselves to a miserable life and an early death for the sake of their fellows? If the poor miner cannot help himself; if the necessities of his position are such that he cannot escape from the craft of his fathers, the Government should at least see that he exercises it as freely as possible from all preventable causes of disease, by means of a strict supervision, which at present it so deplorably neglects to establish.

THE WEEK.

Captain McClintock's return in the *Fox* yacht, and the conclusive results of his search for the remains of the lost Franklin Expedition, give to British perseverance another claim to the title "indomitable", and afford another proof that, with the Briton, to fail implies success. But, amidst the congratulations attendant on the completion of a task that has so often been attempted, and the regrets at the confirmation of our worst anticipations with regard to the fate of Sir John Franklin's gallant crews, we must not forget that a member of our own profession urged with untiring pertinacity upon the authorities, so long as there was a chance of rescuing a single survivor, the adoption of a plan of relief which events have proved would have been attended with the happiest results; and subsequently, after the hope of saving life had become vain, with equal pertinacity urged a similar plan of search for the remains of the missing expedition. To Dr. King belongs the honour of pointing out the true path to the final resting-place of the Franklin Expedition. In February 1847, Dr. King wrote to the authorities, to state his fears for the safety of the expedition, volunteering his services to conduct by the Great Fish River a party for its relief. Again and again was this offer of service repeated. The authorities were, of course, deaf to Dr. King's arguments. Not deterred by official obduracy, or rather stimulated by it, Dr. King has during the past ten or twelve years done his utmost to keep the public mind interested in the fate of his lost countrymen; agitating at one and the same time in the cause of humanity and of national honour. So lately as December 1856, Dr. King, in co-operation with Captain Bedford Pim, proposed to the Government a joint land and sea expedition, which, humanly speaking, would have given, had it been permitted, the most complete elucidation to the Franklin mystery. Surely, for such perseverance in so noble a cause, Dr. King deserves some fitting tribute.

Some experiments regarding the alleged efficacy of curare (or woorara) in the treatment of tetanus have recently been brought before the Academy of Sciences in Paris. It seems that, some weeks ago, in the case of a soldier whose wound had caused tetanus, that the spasms were regularly appeased by the introduction of curare into the system; and that this occurred not only once or twice, but during the whole period of treatment, which lasted above a month. On the other hand, a patient, aged thirty-nine, had tetanus arising from compound fracture of the scapula. Curare was introduced into the arm, and into the integuments over the chest and the right shoulder, at intervals of from seven to ten minutes, without any alleviation of the symptoms. A portion of the same poison, given to a dog, produced the usual result. It is plain, then, that curare is not to be implicitly relied on as a remedy in tetanus. If, however, it be the fact that traumatic tetanus has really been alleviated by its use, its occasional failure should scarcely discourage a trial of its efficacy in other cases of this disease. The remedy is formidable; but the disease is more so, and justifies the use of the means. *Ad extremos morbos, extrema remedia*, is a maxim which has its legitimate application here.

Professor Faraday has directed attention to the means of purifying the water used in lighthouses. The inhabitants of these buildings, from their situation, are often more or less dependent on the supply of rainwater, which is gathered from leaden roofs, galleries, and gutters. The salt from the sea-spray which falls on these roofs forms a chloride of lead, a certain portion of which is dissolved in the rainwater passing over them, sometimes in such a quantity as to be injurious to health. To remedy this, Dr. Faraday recommends that a little whiting or powdered chalk be put into the cistern, the contents of which should be stirred occasionally after rain; the water may then be readily obtained in a perfectly fit state for all culinary and domestic purposes. Information of this kind has, at the instance of Dr. Faraday, already been supplied to a number of lighthouses: and he now publishes it as a fact of general utility.

THE LATE WILLIAM PULTENEY ALISON, M.D., D.C.L.Oxon., F.R.S.E.

VICE-PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION: EMERITUS PROFESSOR OF MEDICINE IN THE UNIVERSITY OF EDINBURGH.

William Pulteney Alison was born in 1790, and therefore, at his death, had reached the boundary of the allotted three score years and ten. His father was the Rev. Archibald Alison, an eloquent preacher, and author of the *Essay on Taste;* his mother was a member of the family of the Gregories, who have for centuries adorned the annals of Scotland with a succession of names celebrated alike in science and literature. His brother is the distinguished historian of Europe, Sir Archibald Alison.

It is believed that Dr. Alison's early predilection was for a military life, and that it was only in deference to the urgent wishes of his father that he abandoned his intention of entering the army. Yet, through life, he continued to take a deep interest in everything pertaining to military affairs—was fond of perusing details of campaigns and battles, and watched with interest the progress of the wars which have happened in our own times. He entered on the study of the medical profession, to which he became deeply devoted, under most favourable auspices; his uncle, the celebrated Dr. James Gregory, holding then the highest rank as a physician, in Edinburgh, and occupying the chair of Practice of Physic in the University. He took his degree in 1811; and henceforward, with the exception of a short period spent in travelling on the Continent after the conclusion of the revolutionary war, he continued to exercise the duties of his profession in Edinburgh. As a dispensary physician, he had large opportunities of practising amongst the poor, to whom his time and services, and his means, were ever cheerfully and liberally devoted. He also became physician to the Royal Infirmary. When but a young man he assisted his uncle, Dr. Gregory, in the delivery of his course of lectures on the practice of physic. In 1820, he was appointed Professor of Medical Jurisprudence in the University. This chair, however, he only held for two years, when he was appointed colleague and successor to Dr. Andrew Duncan, senior, Professor of the Institutes of Medicine. For some years he gave part of the course, at the same time acting as one of the clinical professors. On the death of Dr. Duncan, he became sole Professor of the Institutes of Medicine, comprehending physiology, pathology, and therapeutics. The substance of his physiological lectures was afterwards published in the form of *Outlines of Physiology*, 1831.

After filling the chair of Institutes of Medicine, with great acceptance, for some years, on the chair of Practice of Physic becoming vacant, Dr. Alison was, by universal consent, pointed to as the man best qualified to fill it; accordingly, it was offered to him, spontaneously and unanimously, by the Town Council of Edinburgh. This was a new tax on the energies of the ever energetic man, who was always working as hard as a man could possibly be supposed to work, and yet, like all men of work, could always find time for more. A new course of lectures were now to be prepared; yet not altogether so, as his labours as a physician and as a clinical teacher, had been constantly accumulating for him materials for this course. These lectures, the substance of which was afterwards published as *Outlines of Pathology and Practice of Physic*, had the same characteristics as those on physiology—terse, condensed, inductive, full of solid reliable information. He was not a man to hazard hasty generalisations, and too great a lover of truth to give a false or undue colouring to anything he taught. He might, perhaps, have made his lectures more attractive to those who look only on the surface by another mode of treating the subjects; but he preferred the solid, the real, the true, at whatever cost, to that which only seems.

His practice as a physician continued steadily to increase, so that his time was becoming more valuable, yet did he not abate in his attention to the sick poor. Excepting an attack of fever, caught in the exercise of his profession, and an inflammatory attack at an earlier period, he had enjoyed excellent health. At dawn, he awoke, and read till it was time to rise. His early day was occupied with the reception of numerous patients; and as he performed his duties in the most conscientious and painstaking way in every case, he was often detained listening patiently to wearisome details, and prescribing for all who came till it was time, and often more than time, to keep his appointments in the town. Then came the hospital visit, which occupied fully an hour and a half—often two hours. Then came more visits, often up long fatiguing stairs, in the most destitute localities; then his systematic lectures, and, on certain days, clinical lectures; then more patients to see. All this time he fasted, so that when he came home to a late and irregular dinner, he was fatigued and hungry, and generally ate a hearty meal then.

His evenings were often occupied with visiting patients, and if not, with literary occupations. In these studies the midnight oil was consumed, and often, far into the morning he sat, and thus his hours of sleep were much too few. He loved work for its own sake, but still more because he hoped that the result of that work would increase the comfort and happiness of his fellow-men; and, thus influenced, he cared not to think of self.

Thirteen years ago, when in the full vigour of his intellect, and apparently strong in body—having attained the highest honours of his profession, and, in consequence of the death of Drs. Abercrombie and Davidson, left in possession of the lucrative field of consulting practice almost without a rival—Dr. Alison, whilst visiting the wards of the Infirmary, was unexpectedly struck down by epilepsy. Ever since then, at longer or shorter intervals, and in greater or less severity, these attacks have recurred, shattering by degrees a naturally strong constitution; until at length it has succumbed under the repeated shocks. For a number of years after his first seizure, Dr. Alison was able, in a modified degree, to continue his practice, his lectures, and his literary labours; but latterly he retired altogether from practice, and gave up his professorship without, unfortunately, any stipulation for a retiring allowance. Government, indeed, granted him a pension of £100; but surely this was niggardly recognition of the services of a man who had not only distinguished himself highly in the field of science, but had done the state good service by labours which resulted in benefit to thousands of his fellow-countrymen, whose sufferings, but for his exertions, might have continued to this day.

Rarely did Dr. Alison emerge, of late years, into public life from his retirement; yet the old indomitable spirit still lurked in his energetic bosom. Two years ago, when a question of great interest was being debated, viz., whether the change which of late years has taken place in the method of treatment of inflammatory diseases is due to a change in the character or type of disease, or to a change in our notions as to the nature of diseased action, and to our improved methods of distinguishing disease, Dr. Alison thought it his duty to come forth to do battle in defence of the change of type theory, which, in the Medico-Chirurgical Society, he argued vigorously, and so logically, by reference to the authority of past ages, and by reference to his own experience and that of those of the present day who have had the largest opportunities of observing and treating disease in every form. His last public appearance was in July 1858, when he presided over the annual meeting of the British Medical Association. Selected by the unanimous voice of the Association as the most worthy among the medical worthies of Scotland, he accepted the office, and threw all his remaining energy, as well as the good qualities of his heart, into the performance of its duties. The offer of the presidency made to him was a compliment justly due to his eminent position, and must have gratified him; but perhaps the effort was too great for his impaired strength. Certainly since that period his health has declined in an increased ratio.

The last days of this true philosopher were spent happily, in the retirement of his beautiful Tusculum, near Colinton. Ever and anon attacks of his malady interrupted his pursuits; but in the interval he read both medical and scientific works, and the lighter works of the day; wrote a good deal, and enjoyed the society of those devoted and attached relatives whose delight and whose life it was to minister to his comfort, and who now sincerely mourn his loss. Dr. Alison married his cousin, Miss Gregory, who, however, predeceased him some years, leaving no issue.

His writings on various topics in medicine, general science, social and political economy, etc., were numerous. His admirable pleadings for poor-law reform are worthy of being remembered. Pitched against such an opponent as Dr. Chalmers, he showed himself worthy of his foe; they were well matched both men of vigorous intellect, of strong steadiness of purpose, both actuated by feelings of the most sincere and ardent benevolence; but the practical and practicable gained the victory over the speculative and impracticable—the compulsory system of poor-law relief being more adapted for society as it is; the voluntary system for society as it might or should be. The former, supported by Dr. Alison, triumphed over the latter as supported by Dr. Chalmers; the result being the new system of poor-laws in Scotland, which, defective in some points as they undoubtedly are, must be confessed to be infinitely superior to the system which they supplanted.

To Dr. Alison, also, the Scotch are greatly indebted for the introduction, though tardy, of the system of registration of births, deaths, and marriages. He took an interest, too, in the question of medical reform. In the Association Medical Journal, for June 9th, 1854, there is a correspondence between him and Mr. Nunneley, of Leeds, on this subject. He advocated strongly the necessity of a liberal general education as the best training of the mind for professional studies, and as the best means of elevating the profession which he himself so adorned; and he happily lived to see, in the passing of the Medical Act, the dawning of a new and brighter day for the science and art of medicine.

Dr. Alison combined in his person the eminent physician, the earnest philosopher, the unwearied philanthropist, and the sincere christian. Respected and beloved by all classes, he was, in an especial manner, entitled to the appellation of the "friend of the poor." Dr. Alison has departed just as he lived, quietly and peacefully. We shall not soon look upon his like again. We shall long miss that massy, strongly built bodily frame, which seemed as if it could defy disease and infirmity; that countenance, beaming with intelligence and benevolence; that hand, open as day to melting charity; that kindly voice; that heart, so full of sympathy for human suffering; that vigorous, clear, manly, and persevering intellect, which was exercised untiringly for the good of his species. Of him it may be truly said—more, indeed, than of most men—"He rests from his labours, and his works do follow him." (Abridged from *Edinburgh Evening Courant*, September 24th.)

Association Intelligence.

LETTERS AND COMMUNICATIONS.

Letters or communications for the Journal should be addressed to Dr. Wynter, Coleherne Court, Old Brompton, S.W.

Letters regarding the business department of the Journal, and corrected proofs, should be sent to 37, Great Queen Street, Lincoln's Inn Fields, W.C.

A List of the Members of the British Medical Association will shortly be published in the Journal. Gentlemen whose designations or addresses, as given in the lists published on July 24th and October 9th, 1858, and June 18th, 1859, are inaccurate, will oblige by at once forwarding the necessary corrections to Dr. Williams, Worcester, or Dr. Henry, 37, Great Queen Street, London, W.C.

BRANCH MEETINGS TO BE HELD.

NAME OF BRANCH.	PLACE OF MEETING.	DATE.
Shropshire. [Annual Meeting.]	Raven Hotel, Shrewsbury.	Monday, Oct. 3rd, 2½ P.M.
South Midland. [Ordinary Meeting.]	Swan Hotel, Leighton Buzzard.	Thurs., Oct. 6th, 2 P.M.
Birmingham and Midland Counties. [Ordinary Meeting.]	Hen and Chickens Hotel, Birmingham.	Thursday, Oct. 13th, 6 P.M.

Midland Branch. The quarterly meeting of this Branch is postponed.

[To prevent delay, Reports of Branch Meetings should be sent direct to the office, 37, Great Queen Street.]

ADMISSION OF MEMBERS, AND PAYMENT OF SUBSCRIPTIONS.

The General Secretary of the British Medical Association begs to call attention to the Laws regarding the Admission of Members, and the Payment of their Subscriptions.

"*Admission of Members.* Any qualified medical practitioner, not disqualified by any bye-law, who shall be recommended as eligible by any *three* members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch."

"*Subscriptions.* The subscription to the Association shall be One Guinea annually; and each member, on paying his subscription, shall be entitled to receive the publications of the Association for the current year. The subscription shall date from the 1st January in each year, and shall be considered as due unless notice of withdrawal be given in writing to the Secretary on or before the 25th of December previous."

Either of the following modes of payment may be adopted:—

1. Payment by Post-Office Order to the Treasurer (Sir C. Hastings, M.D., Worcester), or to the undersigned.

2. Payment to the Secretary of the Branch to which the member belongs.

3. Members residing in the Metropolis and vicinity can make their payments through the publisher of the British Medical Journal, Mr. Thomas John Honeyman, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

Philip H. Williams, M.D., *General Secretary.*

Worcester, September 1859.

Editor's Letter Box.

THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

Sir,—As it may interest many of your readers to be informed of the precise character of the examination for the diploma of Licentiate of the Royal College of Physicians of Edinburgh, which has to be passed by those members of the profession already in practice, who may be desirous of taking the Edinburgh diploma, I beg to hand you the Questions that were given to myself and to two other gentlemen, on Sept. 14th.

The examination consists of two parts; one in writing, the other *vivâ voce*, both on the same day. There are four examiners; the candidate is examined by each of the four in succession; each examiner takes about twenty-five minutes, and every question is noted, as is each reply to the question. The questions and replies, as well as the candidates' written paper, then have to go before the council; and with the council rests the granting or withholding the diploma. The examiners on the 14th were Drs. Paterson, Begbie, Wilson, and Duncan, and Dr. R. D. Haldane, Hon. Sec. The questions were:—

In writing. Describe Phlegmonous Erysipelas, its causes, symptoms, terminations, and treatment. Describe Epilepsy; its varieties, causes, symptoms, terminations, and treatment. Elaterium as a purgative. Tartar emetic as a diaphoretic.

Vivâ voce. What are the principal vegetable tonics of the pharmacopœia? How do they differ from each other? Separate the nine tonics from the astringent tonics. Name the vegetable tonics and their salts, which are also antiperiodics. The doses, characters, and the best mode of employing each of them. Name some mineral antiperiodic, and state the form in which you would employ it. State the symptoms which would attend the too long continuing use of arsenic. In suspected poisoning by arsenic, what tests would you employ? The relative value of Reinsch's and Marsh's tests, and apply them both? What vegetable salts are used instead of quinine? Describe chirayta and its effects. Describe a case of acute pneumonia; state the condition of the breathing, pulse, and sputa. The other general symptoms; its different stages in progress and recession; the stethoscopic signs and those by percussion. With what disease of the chest may pneumonia be confounded, and the differential diagnosis? Describe a case of bronchitis, with its several and stethoscopic signs. Describe the more prominent, general, and stethoscopic signs of pleurisy and phthisis. Describe the symptoms of acute rheumatism. What organs are very liable to become affected by rheumatism? What are the general causes of rheumatism? Do you consider it to be a blood disease, and why? Describe rheumatic delirium; and, if death ensues, state the condition of the brain? Describe a case of rheumatic pericarditis and endocarditis, and the pathology, as it refers to the valves and the membranes. Is the heart itself liable to rheumatic inflammation? Describe the stethoscopic signs and the general signs of acute rheumatic pericarditis. What would be your treatment? On what general condition would you treat a case of acute rheumatism? Name some of the plans of treatment that have been recommended, and what you consider to be their relative value. How does opium act in rheumatism, and especially in pericarditis? Describe the probable effects of bloodletting in rheumatism, and when you consider it to be an admissible remedy. Describe a case of cancer uteri. With what other diseases of the uterus would it be liable to be confounded? State the difference between ulcer of the cervix and cancer. State why it is sometimes dangerous to use the speculum in cancer uteri. What other affections of the uterus are attended with pain and floodings? Describe polypus and fibrous tumour. Write a prescription in Latin, and without abbreviations, for a case of diarrhœa in a child.

The above, with the exception of epilepsy, were the questions, as far as I can recollect them (and I wrote them down as soon as I left the college), proposed to and answered by myself. The other gentlemen had much the same sort of examination. I met two of the gentlemen afterwards. Instead of vegetable tonics, one had had the mineral tonics, especially the salts of iron. The other had had the diuretic medicines of the *Pharmacopœia*, their varieties, modes of action, etc. Instead of pneumonia, one had had fever, its varieties and complications; in the other, the affections of the kidneys, more especially Bright's disease, with the chief urinary deposits, and their tests, etc. Instead of uterine disease, the diseases of children, variola, rubeola, and scarlatina, were given.

The examination was conducted throughout in a very clear and gentlemanly manner. It was sufficiently minute fully to test the knowledge which the candidate possessed, and yet sufficiently practical for the candidate to feel that he had a fair field before him, and was not to be cramped into the detail of a mere scholastic exposition.

I have to apologise for the length of this letter; but not having seen a report of these examinations in any medical journal, I felt that it might interest some, if not all, to know what the examination really is. I am, etc.,

A Licentiate of Edinburgh.

Sept. 21st, 1859.

BENIGHTED REGIONS.

Letter from Thomas Littleton, M.B.

Sir,—If Mr. Daniell will refer to the Journal for 1858, Sept. 11th, p. 775, Sept. 25th, p. 815, and Oct. 2nd, p. 839, he will find that I am not the only person who considered that his remarks partook of the nature of an indignity offered to all the natives of Cornwall. He particularised them in his address (June 5th, p. 452) as "the benighted region of Cornwall", "with heads as empty as a drum."

Mr. Kempthorne's remarks met the approbation of all to whom they were addressed; and as they had not been noticed by Mr. Daniell in Mr. Kempthorne's unavoidable absence, I felt it incumbent on me to refer to the subject. This has given Mr. Daniell the opportunity to make, in the pages of this Journal, the gracious amends due to our county and to his own high position.

I may be allowed to differ from Mr. Daniell's opinion, that the appearance of homœopathy in a neighbourhood is a sufficient reason for considering it "a" benighted region. For, to pursue his own argument, if such be the case, then, wherever it receives most encouragement, that place we must fix upon as "the" benighted region of England. I believe, sir, that homœopathy is chiefly encouraged by a particular class in society. And, if my memory does not deceive me, you have in your editorial remarks already noticed the defects in their education.

It is truly surprising to observe the ignorance of men of this class in reference to subjects of such importance. They have hitherto chiefly furnished our statesmen, our admirals, and our generals; yet to them is due the fearful loss of life which ensued from dilatoriness in adopting the proper diet for our sailors, as mentioned by Sir J. Herschel, at p. 53 of his *Discourse on the Study of Natural Philosophy*.

Having had some practical acquaintance with the working of our present system in the late war, and with the results of such want of knowledge, and the consequent inability on the part of commanding officers to appreciate the value of any "recommendations" coming from medical officers, I take this occasion to observe, that your former remarks on this subject deserve to be again and again repeated, and with them the recommendation of Mr. Martin, that a medical gentleman, free from controul and answerable to Parliament alone, should accompany every army in the field in the capacity of Sanitary Commissioner. I am, etc.,

Thomas Littleton.

Saltash, Cornwall, Sept. 26th, 1859.

EXPERIMENTS ON HEALTHY SUBJECTS.

Sir,—In reply to the censures of "Senex," I am happy to be able to state that there is a mistake in the report to which he refers. The children in question were in "good health" *with the exception of a chronic skin disease*, and it was in order to test the alleged special action of belladonna upon the skin, that I was induced to administer it in the instances alluded to.

I should state that it produced no effect whatever upon the state of the skin.

I did not wantonly administer it to the subjects of a public institution, simply because they are defenceless objects of charity; but, as Senex might more charitably have perceived, because a large number of like cases affords the more accurate conditions under which to test a remedy. This remedy had been administered in large doses by Dr. Fuller before I ventured upon its use, in very small doses. No bad results would have ensued but for the dose having been, *per saltum*, quadrupled through the blunder of an attendant.

The above explanation will, I hope, serve to disarm the just indignation of "Senex."

I can further assure him that I would not give to any patient, rich or poor, any remedy that I would not administer to me or mine. I am, etc., "Censured."

September 26th, 1859.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

Of sons, the wives of—

*Brown, John D., M.D., Rochester, on Septembeer 22nd.
*Carpenter, Alfred, M.B., at Croydon, on September 27th.
Horton, Charles, M.D., Bromsgrove, lately.
*Oakley, Charles, Esq., Shrewsbury, on Sept. 24th.
Partridge, Richard, Esq., 17, New Street, on September 24.
Rowe, T. S., M.D., at Margate, on September 27th.

Of daughters, the wives of—

*Brinton, Wm., M.D., at 20, Brook Street, W., on Sept. 21.
Cockell, F. E., Esq., Surgeon, at Dalston, on Sept. 22nd.
*Newman, W., M.B., at Fulbeck, on September 20th.
Stevens, N. H., Esq., Surgeon, Finsbury Circus, on Sept. 26.
Priestley, W. O., M.D., at 31, Somerset St., on Sept. 23rd.

MARRIAGES.

Austen, John I., Esq., Old Charlton, to Margaret Maria, youngest daughter of George Lewis, M.D., of Wiesbaden, at Frankfort-on-the-Maine, on September 20th.

Dickinson, Jonathan, Esq., Surgeon, Middlesborough, to Margaret Ann, youngest daughter of the late John Clough, Esq., Gateshead, on September 21st.

Fisher, Charles H., M.D., of Sittingbourne, to Ellen, second daughter of H. Orfeur, Esq., of Yarmouth, at Bungay, on September 20th.

Heward, Thomas S., L.R.C.P.Ed., of Grosvenor Street, to Sarah, youngest daughter of the late Edward Robarts, Esq., of Chester, on September 27th.

McLorg, the Rev. Edward, to Mary Craven, daughter of the late Wm. Bannister, Esq., Surgeon Madras Army, on September 21st.

Scott, the Rev. Thomas S., curate of Penge, to Louisa, second daughter of *Allen Duke, M.D., of Chichester, on Sept. 27.

Williamson, James, M.D., London, to Emma, only daughter of the late N. B. Fisher, Esq., Surgeon, Bungay, on September 20th.

DEATHS.

*Alison, William P., M.D., F.R.S.E., at Colinton, Edinburgh, aged 69, on September 22nd.

Brown. On August 26, at Poona, aged 26, Catherine Louisa, wife of G. F. H. Brown, Esq., Assistant-Surgeon Bombay Army.

Domville. On September 24th, at Greenwich, aged 65, Mary Efford, widow of the late James Domville, M.D., Deputy Inspector of Hospitals and Fleets.

McCheane, Thomas, M.D., at Lyttelton, New Zealand, aged 37, on May 16th.

APPOINTMENTS.

*Hore, Henry A., Esq., appointed Surgeon, and *Leonard, Crosby, Esq., appointed Assistant-Surgeon, to the Bristol Volunteer Rifle Corps.

*Inman, Thomas, M.D.Lond., Physician to the Liverpool Northern Hospital, appointed Physician to the Liverpool Royal Infirmary.

HEALTH OF LONDON—SEPTEMBER 24th, 1859.

[*From the Registrar-General's Report.*]

		Births.	Deaths.
During week	Boys .. 886 / Girls .. 866	1752 ..	1058
Average of corresponding weeks 1849-58 ..		1572 ..	1031

The decrease in fatal cases of diarrhœa is shown by the numbers of the last three weeks, which were 148, 82, and 61. Of those returned as cholera or choleraic diarrhœa, last week gives only 3, and these occurred to infants. Scarlatina destroyed 83 lives. Small-pox was fatal last week in 23 cases; syphilis in 10; delirium tremens in 4; intemperance in 4. Five nonagenarians died, all women, the oldest of whom was 96 years, and died at the Female Almshouses, Whitechapel. Of bricklayers, 3 died last week, of bricklayers' children, 7; of carpenters, 6 died, of carpenters' wives, 7, of carpenters' children, 25; of painters, 3 died, of painters' children, 12; of plasterers' children, 2 died. At the census of 1851, there were in London 13,919 bricklayers; 23,453 carpenters; 15,369 painters; 4,378 plasterers.

Barometer:

Highest (Sun.) 29.888; lowest (Wed.) 29.288; mean 29.652 in.

Thermometer:

In sun—highest (Sat.) 87.2°; lowest (Sun.) 68·0°.
In shade—highest (Sat.) 76°; lowest (Tues.) 41.5°.
Mean—56.5°; difference from mean of 43 yrs. +1°.
Range—during week, 34.5°; mean daily, 19.1°.

Mean humidity of air (*saturation*=100), 78.

Mean direction of wind, S.W.—Rain in inches, 0.64.

Army Medical Staff Corps. On Monday, an order was forwarded to all the military hospitals from the Medical Department, for a number of volunteers from the Medical Staff Corps for the Army Hospital Corps. The volunteers are to receive instruction for three months in the surgery at Chatham Garrison, to qualify themselves for compounding medicines. Those who are found to be qualified, after an examination by a board of officers, are to receive one shilling per day, in addition to their pay. Seven intelligent young men at Fort Pitt and at the Garrison Hospital, volunteered as soon as the order was read.

University of Edinburgh. Sir David Brewster has been elected, by the Town Council of Edinburgh, Principal of the University of Edinburgh. The appointment creates a vacancy in the principalship of the University of St. Andrews.

University of St. Andrews. The *Edinburgh Evening Courant* of September 24, says: We are requested to state that there is no authority whatever for the paragraph which has been going the rounds of the newspapers to the effect that "the Professors of this University have received notice that the Royal Commissioners intend to issue an ordinance requiring one year's residence from every candidate for a medical degree at that University."

A French Idea of Smoking in England. The *Athenæum* says, that "M. Bouisson, of Montpelier, has been wasting a fine imagination on the abuses of tobacco. Sylvester himself scarcely battered and shattered the pipe of peace with more acrimony than M. Bouisson, who calls upon his medical brethren throughout the world to lay down their own cigars, and menace every smoker of Cuba and Latakia with early death. His statistics are marvellous and appalling. For example, he denounces to us the fact, that in England 'boys smoke from 5 o'clock in the afternoon till 3 o'clock in the morning,' and that 'children of ten years old are known to consume *as many as forty cigars in a day.*'"

TO CORRESPONDENTS.

H. T. T. Apply to either of the Secretaries of the Metropolitan Counties Branch—Dr. Stewart, 74, Grosvenor Street, W.; or Dr. Henry, 37, Gt. Queen Street, W.C.

Communications have been received from:—Mr. T. W. Nunn; Dr. James Russell; Dr. Lionel Beale; Dr. E. Crisp; Mr. F. G. Harcourt; Dr. Hyde Salter; Dr. T. H. Jackson; Mr. W. Martin; Dr. W. Ogle; Dr. T. Herbert Barker; Dr. B. W. Richardson; Mr. Chas. Oakley; Mr. J. A. Metcalfe; Dr. W. O. Markham; Dr. Sloane; Mr. T. Holmes; Dr. T. Inman; Dr. T. Littleton; Dr. Humphry Sandwith; Mr. A. Prichard; Dr. F. J. Brown; Dr. Styrap; Mr. J. V. Solomon; Mr. James Reid; Mr. W. Martin; Dr. H. Goode; Censured; A Licentiate, Edin.; Dr. Thos. Sandwith; Mr. S. B. Farr; Dr. Whytehead; Mr. T. Taplin; Dr. Trevor Morris; The Secretaries of the Medical Schools of the London Hospital, St. Thomas's Hospital, and Westminster Hospital; and The Secretary of the College of Dentists.

BOOKS RECEIVED.

[** An Asterisk is prefixed to the names of Members of the Association.*]

1. Lectures on the Diseases of Infancy and Childhood. By Charles West, M.D. 4th edition, revised and enlarged. London: Longmans. 1859.
2. A Statistical Investigation into the Mortality of the Miners in the District of Lelant. By *Richard Q. Couch, F.R.C.S.